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COVER STORY

30



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A special thanks to the fine folks of Vandenberg Air Force Base for hosting the World's Greatest Drag Race.

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From Down Under to Up Over: Hot Takes and Flying 'Vettes

Hard to believe this is our 12th edition of Best Driver's Car. Some may recall the original concept, Best Handling Car, and all of the sensors, stickers, and other gear we attached to the season's hottest sports cars, all in the name of determining what makes great-handling cars so great.

Over time, we moved to a more human-centered approach, looking beyond yaw angle and step steer to the full driving experience, from canyon roads to track modes and the transitions in between.

BDC tests both human and machine, as it marks the beginning of our most grueling, test-heavy part of the year. This year, the bulk of BDC spanned eight straight days, 8,000 total miles driven, 80 tires scorched, and 40-degree temperature swings endured.

To maximize time for photo, video, hill climbs, and hot laps, every day started early and ended late—with lots of hurry up and wait. Near the end, if you showed me one of our supercars, I could show you a guy tired of driving it.

Except for an Aussie named Quang. After getting married, I conned my bride into an Australian honeymoon, which was actually an excuse to visit family we don't see often. While there, I made an offhand invitation to my cousin's husband, Quang, a dentist, photo hobbyist, and massive car nerd. "If you're willing to fly out, wash cars, load tires, and snap photos, I'll see what I can do," I told him. He bought a nonrefundable plane ticket before the dates were even finalized.

To see our traveling circus through his fresh eyes was an unexpected treat. After he had time to process it all, I asked him what surprised him about BDC, expecting commentary on the face-melting speed of the Senna, the easy drivability of the Hellcat Redeye, or even the terrible Vietnamese sandwiches we ate in King City.

"The scale—I didn't expect the amount of work that went on behind the scenes," he replied. "Also, how



smooth the operation was, from production to logistics, photography to video. The team just knew what they were doing and went about it like professionals." Quang was also impressed by the driving skills of all the editors and video talent—compliments we return in kind. His images are seen below and scattered throughout the BDC package. Quang also piloted the BMW M2 Competition for the cover shot. Nice work, mate.

Speaking of cover shots, about that Corvette: There's always some risk in putting four wheels into the air, but we do our best to mitigate any danger. The location of the shoot is a lightly trafficked road we know very well. We didn't have the same familiarity with the car, as we were the first outlet in the world to test the new mid-engine Corvette, but sending it was a calculated risk.

We know Chevrolet has done extensive testing at the Nürburgring, particularly for Corvette and Camaro. In fact, Flying Car mode was developed specifically for the 2014 Camaro Z/28 to ensure the electronic stability control system wouldn't cut power midair at the Flugplatz (airport) section of the 'Ring.

For the C8, we decided Tour mode was the best bet, reasoning that the plush setting of the magnetic ride control shocks would make for the softest landing. And we were right: The new Corvette lands as smoothly as it launches—and it's a grin-maker from beginning to end. Hope you feel the same way about this issue. ■

One of the perks of being related to Ed Loh: the once-in-a-lifetime opportunity to provide unpaid labor during Best Driver's Car.

We were the first outlet in the world to test the new mid-engine Corvette.

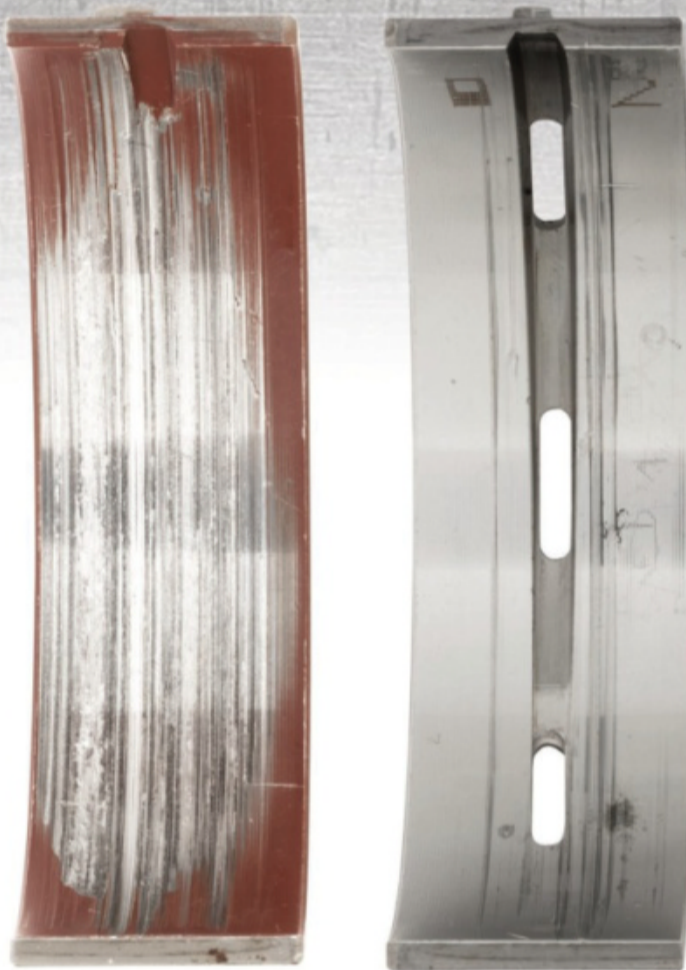
The Dodge Challenger SRT Hellcat finally makes an appearance in Best Driver's Car (page 30).



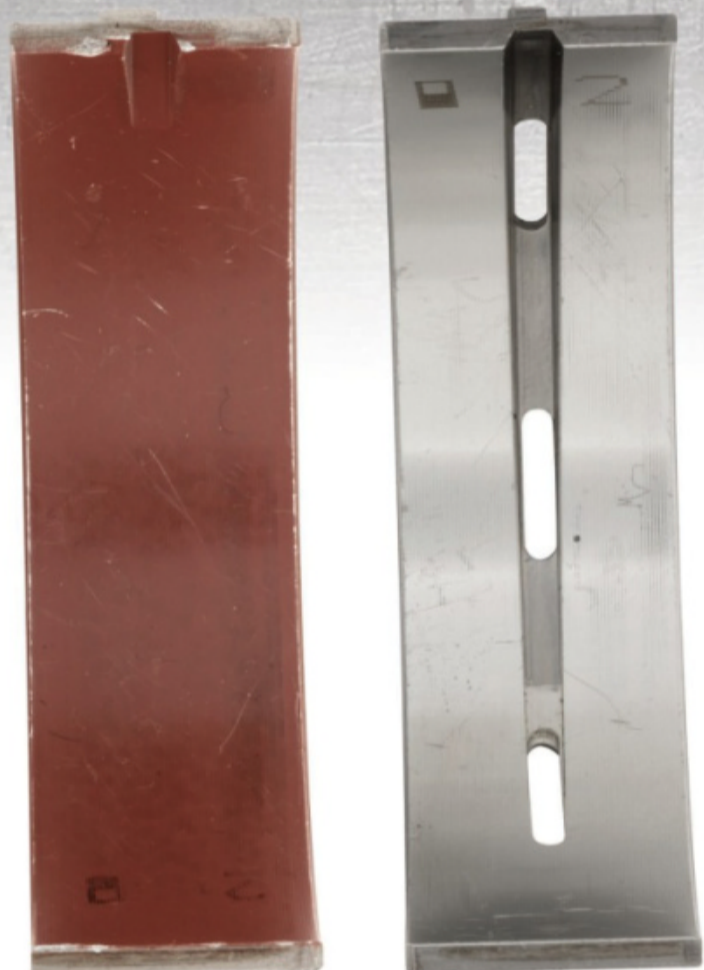
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Trend 12.19

Ford v Ferrari

A legendary racing tale inspires a big-screen production starring Matt Damon and Christian Bale

WORDS JONNY LIEBERMAN

There are facts, and then there are Hollywood films inspired by facts. *Ford v Ferrari*, releasing on November 15, is an example of the latter. But don't be dissuaded.

Viewed through a documentarian's lens, there's a great deal missing or wrong with the movie, directed by James Mangold and based on a true story. For instance, Carroll Shelby was a head taller than Matt Damon. Having met Carroll twice, I never bought Damon as Shelby. It should've been Vince Vaughn. He's a more appropriate 6-foot-5, does a great Southern drawl, and even has curly brown hair.

Moreover, there wasn't a single blonde female pictured on Shelby's arm, a glaring inaccuracy by all accounts. Also, Denny Hulme, Ken Miles' co-driver at the 1966 24 Hours of Le Mans, was barely on screen.



Ford GT40s took the top three spots in the 1966 24 Hours of Le Mans.



Ken Miles

The biggest omission, from a pedantic car-nut perspective, is that *Ford v Ferrari* doesn't even acknowledge the Shelby/Ferrari feud or that Carroll and his crew won the GT class (beating *Il Grande Vecchio's* 250 GTOs) at the 1964 Le Mans race. That stuff just isn't there.

But forget all that. Allow your nerd rage to subside.

THEY TOOK THE AMERICAN DREAM FOR A RIDE
MATT DAMON CHRISTIAN BALE
FORD v FERRARI
NOVEMBER 15

Ford v Ferrari, starring Matt Damon and Christian Bale, tells of one of racing's iconic battles. The film opens on November 15.



Instead, let's look to another filmmaker—the great Werner Herzog—for the proper lens to view *Ford v Ferrari* through.

In 1999, Herzog released his Minnesota Declaration, 12 principles about his view of truth vis-a-vis documentaries. The whole thing is worth reading (especially the part about then-governor Jesse “The Body” Ventura). But his fifth principle is most illuminative here: “There are deeper strata of truth in cinema, and there is such a thing as poetic, ecstatic truth. It is mysterious and elusive, and can be reached only through fabrication and imagination and stylization.”

Viewed through Herzog's prism, Mangold's new film is freaking awesome. You're gonna love it.

The story is: In order to sex up the Ford brand, Lee Iacocca (Jon Bernthal) knows in his gut that baby boomers find racing cool. As such, he convinces Henry Ford II (Tracy Letts) to try to buy nearly bankrupt Ferrari. However, *Il Commendatore* (Remo Girone) never intends to sell out to an American company that makes “ugly little cars.”

Instead, Enzo uses Ford's offer to get Fiat to invest/save his company. Infuriated, Hank the Deuce hires Shelby and his company to go to Le Mans and “bury that [unkind slur for Italians] 100 feet below the starting line.” Shelby and his driver/mechanic Ken Miles (Christian Bale), along with





Shelby chief engineer Phil Remington (Ray McKinnon) and Ford engineer Roy Lunn (JJ Field), have a few months to build the Ford GT40, a race car that would (eventually) become the most dominant of its era and one of the most significant cars of all time.

The filmmaking is fantastic. The performances are A-list across the board. (Bale certainly will be nominated for Best Actor.) The cars (Mk II GT40s, Ferrari 330 P3s, Porsche 906 Carreras, plus uncountable Cobras and Daytonas) are the stuff car dreams are made of. Most significant, the storytelling shines and sizzles.

And if we're talking about sound, it *thumps*. Do you like the meaty thunder of American V-8s and killer bee screams of Italian V-12s?

Then see this one in a proper theater. Thank me later.

The racing sequences are impressive, striking the right balance between realism and stylization. For instance, to go faster, Miles shifts *up* to a higher gear. I promise, the driving stuff is excellent, especially once they get to the Great Race and all the rubbing, bumping, and crashing that ensues.

As biopics go, I love the nuance on display. Henry Ford II isn't portrayed as 100 percent good, nor is Enzo Ferrari a pure villain. Remington, a personal hero, is given ample screen time. You'll know the scene when you see it, but Remington saves the Le Mans effort armed only with a hammer.

In drama, you need an antagonist, and the roll of



villain falls to Leo Beebe (Josh Lucas), the director of Ford Special Vehicles. Without giving too much away, Beebe doesn't like Shelby much, and he absolutely detests Miles. Why? He's not a Ford man. To be fair, the way Miles is portrayed in the film makes him unlovable, which, according to what I know, ain't how Miles was in real life. Again, it's a film, not a documentary.

I recently had a chat with Ian Callum, the former head of design for Jaguar, about why he stopped judging concours events. Basically, he grew disillusioned with anal-retentive judges *not* voting for the best car because

some of the screws' head patterns were wrong.

What Shelby, Miles, Remington, and Lunn (and Hulme!) did is so important, amazing, and wonderful that the ecstatic truth of their story deserves the largest audience possible. If that means a too-short Shelby and a grumpy Miles, so be it.

"By dint of declaration the so-called Cinema Verité is devoid of verité," Herzog declared. "It reaches a merely superficial truth, the truth of accountants." If there's one thing accountants hate, it's racing. If there's one thing you'll come away in love with after watching *Ford v Ferrari*, it's racing, too.



Intake

Frankfurt Show Favorites



F8 Spider



812 GTS

FIRST LOOK

With supercars, EVs, and visions of the future, this year's Frankfurt Motor Show had something for everyone. We've selected the six most interesting production cars and concepts to drool over.

Ferrari 812 GTS and F8 Spider

Ferrari is going topless in a big way, with two new convertibles just announced, one of which was completely unexpected. The 812 Superfast now adds a sibling, the 812 GTS, the first production V-12 Ferrari convertible in 50 years (the last being the 365 GTS/4 Daytona, not counting a few one-offs). Fitting the folding metal top required quite a bit of restyling out back and added 165 pounds, but hey, it has 789 hp. If an 812 is just too much money, Ferrari also rolled out the F8 Spider with "only" 710 hp from a twin-turbo V-8. Both cars get folding metal tops that go down in 14 seconds at up to 28 mph, and both hit 60 mph in under 3 seconds on the way to a 211-mph top speed.

Lamborghini Sián

As means to meet fuel economy and emissions regulations, Lamborghini has been adamantly against turbochargers and heavy batteries. Instead, it offers a supercapacitor in the new Sián special

edition car. Cramming a 48-volt electric motor into the transmission gives the upgraded 774-hp V-12 a 34-hp boost during shifts and at parking lot speeds. It'll continue to assist the engine at up to 80 mph, after which it's all gasoline power. Supercapacitors can discharge and recharge much faster than a battery, and they can be much smaller and lighter. The entire system adds only 75 pounds to the Sián but gives it a combined 808 hp. What's more, the supercapacitor is completely refilled every time the car brakes, so it's always ready. Only 63 Siáns will be made, and they're already sold.



Audi AI Trail

The fourth in Audi's AI series of EV concepts, the AI Trail imagines what a futuristic off-road EV could look like. With four motors good for 435 hp and 738 lb-ft and 13.4 inches of ground clearance with 33.5-inch tires, it certainly has

REAR VIEW

From the *MotorTrend* Archive ...

50

December 1969
PRICE: \$0.50

Talk about foreshadowing. Back in December 1969, we dreamed of a Chevy vs. Ford mid-engine supercar battle. The cars were the Ford Mach 2 and Chevy Astro II, both of which we expected to go on sale by 1971. The

Ford was built with lessons learned from the GT40 and featured a 302-cubic-inch V-8 and a Lotus-tuned suspension. The Chevy had a 427-cubic-inch V-8. The Detroit mid-engine battle would have to wait until 2020, with the latest incarnation of the Ford GT and Chevy building a mid-engine Corvette.



30

December 1989
PRICE: \$3.50

Nothing really sums up *MotorTrend* in the '80s better than wedge-shaped cars and models with big hair and high heels, so it's fitting we said goodbye to the decade in a spread of scantily clad women draped over bad '80s cars. Perhaps some issues have aged better than this one.



10

December 2009
PRICE: \$4.99

Looking forward to the 2010s, we closed out the decade with three tuner muscle cars: the 650-hp Hennessey Camaro HPE650, 700-hp Speedfactory Challenger SRT8, and the 750-hp Shelby GT500 Super Snake. We also named the Subaru Outback our 2010 SUV of the Year.



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MIKE CONNOR



The Audi AI Trail concept takes an extreme view on the future of off-roading.

the hardware for a dystopian wasteland. A large battery under the floor gives it more than 250 miles of range, and Level 4 driving tech means it can autonomously do nearly all of the driving on what roads are left. A terrain-reading camera and central tire inflation system automatically adjust tire pressures as needed. Cool bonus: The headlights are actually drones that can take off and light the road or trail ahead from different angles. An interior made of recycled materials helps burnish its green image.



that prompted VW's EV surge all began). Our first ID model will be a crossover similar to the ID Crozz concept, riding on the same MEB platform as the ID 3. The ID 3 is rear drive with its battery under the floor and between the wheels. Three batteries will be offered, a 45-kW-hr pack with less than 200 miles of range, a 58-kW-hr pack with just over 200 miles of range, and a 77-kW-hr pack with about 300 miles of range. On a 100-kW DC fast charger, 180 miles of range can be added in 30 minutes.

Mercedes-Benz Vision EQS Concept

After ceding the luxury EV market to Tesla for the better part of a decade, noted luxury purveyor Mercedes-Benz is finally getting serious about EVs with its first production model, the EQC, and this S-Class-like flagship concept, the EQS. Built on a new EV platform, the EQS has motors at each axle making a combined 469 hp and 560 lb-ft that'll get it to 60 mph in less than 4.5 seconds. Fast charging at 350 kW would get the battery back up to 80 percent in less than 20 minutes. A big battery would give it a range of more than 350 miles. Level 3 autonomous driving is on the table. Made with recycled materials in a process promised to be carbon neutral, it previews the future of Mercedes-Benz styling and production. **Scott Evans**



BMW Concept 4

With an all-new 3 Series sedan just out, you know a 4 Series coupe can't be far behind. BMW's inexplicable infatuation with gargantuan grilles is on full display here, but don't get too worked up over it. Spy photos suggest the production grille will be large, indeed, but it'll be half the height of this monster. Mechanically identical to the 3 Series, expect the real 4 Series to get turbocharged four- and six-cylinder engines with eight-speed automatic transmissions. Coupe and Gran Coupe two- and four-door body styles are a given, with the traditional convertible less likely as the market evaporates. Expect a rip-snortin' M4 down the line.

Volkswagen ID 3

Volkswagen's massive charge into electric vehicles officially begins with the ID 3 hatchback, which won't be coming to the U.S. (ironically, where the diesel scandal



MT CONFIDENTIAL

Jaguar Land Rover looks like it's zigging as its rivals zag. The platform developed for the Jaguar I-Pace will be a one-hit wonder, according to sources in Coventry. Next-gen Jaguar Land Rover EVs, including the XJ, will be built on the company's new Modular Longitudinal Architecture, which is designed to accommodate mild hybrid and plug-in hybrid powertrains in addition to a BEV powertrain. In industry-speak, MLA is called a convergence platform, and although it offers benefits in cost and manufacturing flexibility, it also means future electric Jaguars and Land Rovers might not have the packaging efficiency or range as rivals built on skateboard platforms. Design compromises also mean a convergence platform is likely to be heavier. JLR's move comes as VW Group and Daimler are working on bespoke BEV platforms. **Will there be an SVR version of the new Land Rover Defender?** Sources in Solihull are tight-lipped, but JLR's all-new off-roader is built on a heavy-duty variant of the aluminum-intensive D7u architecture that underpins the Range Rover and Range Rover Sport, which suggests a high-performance V-8 could fit under the hood of the reinvented icon. JLR has moved aggressively to offer a huge range of accessories for the Defender. And with the proliferation of aftermarket companies making big money rebuilding old Defenders, a factory-built hot Defender seems like a no-brainer. **EV startup Byton has more than 100 prototypes of its M-Byte crossover on the road as it counts down to a 2020 launch.** The M-Byte will be available in AWD and RWD form, with 71-kW-hr and 95-kW-hr battery packs providing up to 250 miles and 325 miles of range, respectively. Roughly the size of an Audi Q7, the M-Byte will seat five and has a target base price of about \$45,000, thanks to its low-cost all-steel body structure. The M-Byte is the first of three BEVs Byton is planning. Coming next is a three-box sedan called K-Byte, which will be followed by an unnamed three-row crossover. **Pininfarina is reportedly working on a follow-up to the Battista supercar.** No details yet from the Indian-owned company, but the vehicle is believed to be a stylish high-performance crossover.

Back in Black:
The New Face of
Luxury Watches
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—M., Wheeling, IL

I’LL TAKE MINE BLACK...NO SUGAR

In the early 1930s watch manufacturers took a clue from Henry Ford’s favorite quote concerning his automobiles, “You can have any color as long as it is black.” Black dialed watches became the rage especially with pilots and race drivers. Of course, since the black dial went well with a black tuxedo, the adventurer’s black dial watch easily moved from the airplane hangar to dancing at the nightclub. Now, Stauer brings back the “Noire”, a design based on an elegant timepiece built in 1936. Black dialed, complex automatics from the 1930s have recently hit new heights at auction. One was sold for in excess of \$600,000. We thought that you might like to have an affordable version that will be much more accurate than the original.

Basic black with a twist. Not only are the dial, hands and face vintage, but we used a 27-jeweled automatic movement. This is the kind of engineering desired by fine watch collectors worldwide. But since we design this classic movement on state of the art computer-controlled Swiss built machines, the accuracy is excellent. Three interior dials display day, month and date. We have priced the luxurious Stauer *Noire* at a price to keep you in the black... only 3 payments of \$33. So slip into the back of your black limousine, savor some rich tasting black coffee and look at your wrist knowing that you have some great times on your hands.



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Meet the Family: How *MotorTrend* makes Best Driver's Car happen

Content wants to be free, so goes the saying of the internet world.

Except that good content like *MotorTrend's* Best Driver's Car costs a small fortune to produce. Sure, we could pile in a few cars, drive around for a day, then kick back and write a couple snarky blogs. But if you want something that actually adds value to the lives of your subscribers ... well, that takes cubic dollars.

So as you read through this magazine (which you or your dentist paid for), you are going to see several teasers to videos that only reside on MotorTrendOnDemand.com. And as MTOD is a subscription service, you'll need to pay the equivalent of a caramel macchiato for a month's access to binge-watch an endless stream of thrilling Best Driver's Car video content (not to mention seasons 2 through 25 of BBC *Top Gear* and our other MotorTrend streaming video, from *Roadkill* to *Drift This* to *Throttle Out*).

Please allow me to give you a sense of the undertaking that is Best Driver's Car. Then you'll see why subscribing to MTOD is worth it.

First of all, it basically takes the entire editorial staff of this publication (the entire left side of the masthead, on page 8), six months to plan, actualize, test, drive, race, shoot, and then produce and publish all the content you will see within these pages and on our websites.

But this year's production was larger than usual. Two European *MotorTrend* affiliates—from Germany and Poland—also shipped over video crews. Germany's Axel Stein is a heck of a driver and also a bona fide TV star (check out *Hausmeister Krause*, a Deutschland knock-off of *Friends*). From Poland came Patryk Mikiciuk, host of *Automaniak*—think of a Polish Jonny Lieberman, only a lot richer. Kate Dean, our VP of development, got the international-content deal done, and our overseas director of content, Francesca Lossa, handled those myriad logistics, such as getting a squad of foreign nationals onto an active U.S. Air Force base.

Then, on a whim, we decided to *race* some of the BDC field around Laguna Seca, so we brought in veteran endurance racer Marino Franchitti and drift king Chris Forsberg to help create a thrilling spectacle.

In terms of a video crew to chronicle all this madness, we have our own Bear Dog Entertainment (long story about the name—ask Jonny next time you see him). If it required car-to-car action, a perfect fly-by drone shot (thanks to Mahdad and Hoda Emadipour) or the just-right GoPro angle, Bear Dog nailed it—with perfect lighting and sound—overseen by executive producer Levi Rugg and showrunner Matt Schutz. A small army of production assistants ensured every car was gleaming and clean and where it needed to be when it needed to be there. And of

course, our crack photography team captured the dozens of still images you see on these pages (and even more online).

The logistics of traveling, feeding, and lodging the team would make a quartermaster swoon. Our Melinda Graves made sure no one sweated any detail on the road. Overseeing the logistics behind this whole bonanza was Luis Navarro, who is probably still rolled up in a fetal position somewhere.

Almost every manufacturer involved sends a team of technicians to ensure its cars are in tip-top shape before our Randy Pobst wails around WeatherTech Raceway Laguna Seca. Plus, a couple of the OEMs bought our whole crew lunch during those days at the track—thanks to Mercedes-AMG and Bentley.

Best Driver's Car also doesn't happen without the support and cooperation of Monterey County, the owners of WeatherTech Raceway Laguna Seca. This is one of the world's most spectacular, legendary racetracks. No one else has the Corkscrew—or such a professional staff aiming to meet our needs. Plus, when you're hanging out afterward, there are few places more gorgeous to beach-fire your s'mores than the Monterey Bay.

Last, and perhaps most important, we at *MotorTrend* wish to thank the servicemen and -women of Vandenberg U.S. Air Force Base, 30th Space Wing and Western Launch and Test Range, who hosted their third straight year of the World's Greatest Drag Race. That meant, among other things, helping stage our dozen cars for endless attempts at a synchronized launch, as well as generously giving us a tour of the "Slick Six" Delta Heavy launch site.

Special thanks go to Capt. Travis Schirner of the U.S. Air Force Entertainment Liaison Office and especially to base commander Col. Anthony Mastalir, who obtained permission from the Pentagon to allow our merry band of hooligans on site.

It was, in all, a great adventure. We hope you enjoy this year's tale, with or without a macchiato. ■

The logistics of MotorTrend Best Driver's Car would make a quartermaster swoon.

If you want to know how immense Vandenberg AFB's "Slick Six" staging tower is, this photo would reach upward to the top of this page.



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Frank Markus

Technologue



Gneiss 'n' Strong: CO₂-eating algae yields earth-friendly cars

Carbon fiber seems relatively good for the environment—it makes cars and planes so much lighter that they get way better gas mileage, right? True, but this simple analysis forgives the fact that cured carbon-fiber structures are extremely energy-intensive to produce. That's why BMW sourced the carbon fiber for its i3 and i8 cars from Moses Lake, Washington, where hydroelectric energy drastically lowers the footprint of its carbon.

Now researchers at the Technical University of Munich have discovered a process that turns that notion on its head—CO₂-negative carbon fiber. That's right, producing polyacrylonitrile feedstock from algae and curing it using parabolic-reflected solar energy produces fibers that match the properties of hydrocarbon-derived fibers while leaving the atmosphere with less CO₂ in it than if the carbon fiber had never been produced.

TUM's algae bind CO₂ in sugars and algae oil, then a special oil-forming yeast makes yeast oils from the algal sugars and cell walls. Enzymes attack these algal and yeast oils to form fatty acids and glycerin. The glycerin goes on to become carbon fiber while the fatty acids can be used as lubricant additives.

The AlgaeTec research facility on the university's Ludwig Bölkow Campus in suburban Munich was partially funded by Airbus as part of its algae-powered flight project, which aimed to derive bio-kerosene from algae. Algae-derived jet fuel may never prove economically viable, but the TUM researchers say that large-scale production of CO₂-negative carbon fiber has the potential to offset all carbon produced by the aviation sector.

How large-scale? "The size of Algeria," says Synthetic

Biotech chairman Thomas Brück. That sounds absurd, but the algae involved thrive on saltwater, sunshine, and CO₂, and the Sahara has access to plenty of the first two. The CO₂ would be the trickier ingredient to source in our Algeria-sized farm because TUM's process relies on a direct, rich stream of CO₂ exhaust from a steel production plant. (A fossil-fueled electricity plant's exhaust stream would also work.)

It's unclear how many steel and/or energy plants would need to be constructed in the Sahara for this to play out, but we're car people, not airplane people, so let's content ourselves with smaller-scale operations sized to supply automotive carbon fiber co-located with existing plants in areas sunny enough to support both the algae growth and the curing operations. (And if we end up displacing some agriculture, at least TUM claims the algae's economic yield is up to 10 times greater than with wheat or corn and has no fertilizer runoff.)

Vehicle structures aren't the only automotive-related use for this CO₂-negative carbon. TUM also proposes replacing

steel or stressed, reinforced concrete in highway bridge beams with a bold new technology that sandwiches granite or other gneiss stone (formed under high temperature and pressure) between two sheets of carbon fiber. Known as CarbonFiberStone (CFS), I-beams made of this sandwich material are said to have the strength of a similar steel beam with the weight of an aluminum beam and vastly lower carbon footprints than that of aluminum, steel, or concrete.

Need more? How about strapping on a set of skis made of CFS? Swiss company Zai AG's Spada skis are made using Swiss Alpine Calanca gneiss and ordinary carbon fiber. They are lighter than aluminum, highly flexible, and boast superior vibration-damping properties to traditional skis. Priced at about \$6,850 to start, they're among the priciest skis extant, but Mother Earth will thank you.

Speaking of price, the TUM team is not yet ready to compare the cost of algal carbon fiber with that of current products, though the team is confident the process can be made price competitive.

What about end of life? TUM testing suggests that once locked away in carbon fiber, the CO₂ stays out of the atmosphere. But to be certain, Brück's team suggests burying used-up, shredded carbon fiber in coal seams. Imagine what our descendants will make of it when they mine it millennia hence. ■

Large-scale production of CO₂-negative carbon fiber could offset all carbon produced by the aviation sector.

An I-beam made from gneiss stone sandwiched between sheets of carbon fiber provides the strength of steel with the weight of aluminum with a lower carbon footprint than either material. The same material can also be used to make skis.



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Interview

Nick Rogers

Executive Director,
Product Engineering
Jaguar Land Rover

Nick Rogers has been there, done that. He started his career more than 35 years ago as an electrical engineering apprentice with British Leyland, then switched to body engineering after a medical examination revealed he was colorblind.

Rogers has since weathered the British automaker's stormy decline and troubled rebirth, working with Honda on joint venture projects and for owners BMW and Ford before India's Tata Motors took over in 2008. He was vehicle line director for the current Range Rover and Range Rover Sport before being appointed global vehicle architecture director for Land Rover in 2013. Since 2015 he's been responsible for product engineering of all Jaguar Land Rover vehicles.

As a lifelong Land Rover fan—Rogers learned to drive in a Land Rover on the family farm and owns two early-build 1948 Series I models—the launch of the long-awaited all-new Defender is a moment of deep personal significance.

The new Defender has been a long time coming. Why? The original Land Rover was an incredibly pioneering product. It was always a challenge of exactly how do you reinvent the Defender, how do you repeat it? We had to find a way to create that appeal, that fun, that authentic capability in a modern way.

Did you feel any pressure reimagining one of the world's true automotive icons? In some ways. But it became such a cool, obsessive thing to work on. We used to always say to ourselves, what do we want people to say about this? But we didn't think about it. We just got on with it.



“THE ORIGINAL LAND ROVER WAS AN INCREDIBLY PIONEERING PRODUCT. HOW DO YOU REPEAT IT?”

Did the Defender's heritage complicate the project in any way?

I don't believe so. One of the things we did was spend quite a bit of time with my own Land Rover Series 1—in the studio and riding around in it, as well. We understood the whole vehicle was about functionality, delivering something to change people's lives, and making their lives fun. And that's the feeling we wanted to get into the new Defender.

Were body-on-frame construction and live axles ever considered for the new Defender? No. We were absolutely

adamant that while you have to be very respectful and get yourself in the mindset of what your history is all about, it's really important that you don't dwell in it.

Most owners never take their SUVs off the pavement these days, so how important is off-road capability? It's all about authenticity. The Defender doesn't look like overindulgence. It looks like a vehicle that has capability, that if you do get in a difficult situation, you're going to get through it. It can wade through almost 3 feet of water, it has impressive approach and departure angles, and it can tow the maximum legal limits with absolute ease.

What was the one thing that kept you awake at night during the development program? I knew if the Defender wasn't authentic, a lot of people I know would be disappointed, and they would tell me they were disappointed. I had a duty to deliver something that everybody was going to say was worthy.

What part of the Defender are you proudest of? The interior, if I'm honest. The center console is like a fortress, and the exposed magnesium cross-car beam with the grab handles on either end is really cool and really different. Also, the smile the Defender puts on your face when you drive it. It feels so agile and smaller than it really is.

What would you say to Land Rover creators Maurice and Spencer Wilks if you could show them the new Defender? I would say, “I really hope you're proud.”

Angus MacKenzie



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— A. F., Ft Lupton, CO

African Gem Cutter Makes \$2,689,000 Mistake...Will You?

This story breaks my heart every time. Allegedly, just two years after the discovery of tanzanite in 1967, a Maasai tribesman knocked on the door of a gem cutter's office in Nairobi. The Maasai had brought along an enormous chunk of tanzanite and he was looking to sell. His asking price? Fifty dollars. But the gem cutter was suspicious and assumed that a stone so large could only be glass. The cutter told the tribesman, no thanks, and sent him on his way. Huge mistake. It turns out that the gem was genuine and would have easily dwarfed the world's largest cut tanzanite at the time. Based on common pricing, that "chunk" could have been worth close to \$3,000,000!

The tanzanite gem cutter missed his chance to hit the jeweler's jackpot...and make history. Would you have made the same mistake then? Will you make it today?

In the decades since its discovery, tanzanite has become one of the world's most coveted gemstones. Found in only one remote place on Earth (in Tanzania's Merelani Hills, in the shadow of Mount Kilimanjaro), the precious purple stone is 1,000 times rarer than diamonds. Luxury retailers have been quick to sound the alarm, warning that supplies of tanzanite will not last forever. And in this case, they're right. Once the last purple gem is pulled from the Earth, that's it. No more tanzanite. Most believe that we only have a twenty year supply left, which is why it's so amazing for us to offer this incredible price break. Some retailers along Fifth Avenue are more than happy to charge you outrageous prices for this rarity. Not Stauer. Staying true to our contrarian nature, we've decided to lower the price of one of the world's rarest and most popular gemstones.

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Readers Respond To Past Issues

New World Order

While reading through the well-written article comparing the Alfa Romeo Giulia to the BMW 330i in the August issue, written by Miguel Cortina, I noted a line that said, "But for the brand that created the Ultimate Driving Machine slogan ..."

Wanted to mention, as it's possible Miguel isn't familiar with this, especially if he's a younger guy, that Pontiac first created that slogan for the 1967 GTO and used it in its TV advertising as well as in its factory brochures. I have one of the '67 Pontiac full-range brochures, and it has the phrase in the GTO section.

It appears Pontiac never bothered to copyright the phrase, so BMW was free to use it without restriction later. From what I've read, Bob Lutz is credited with bringing it to BMW from Pontiac. And yeah, I'm a Pontiac fan.

I enjoy your magazine. I used to get a fair number of auto magazines but have pared it down to just a couple I consider the best, including yours.

Dan Manley
via email

You are correct. Perhaps the reason Pontiac never trademarked the slogan was because it had relatively little impact—especially compared to how BMW later made it work for its brand.—Ed.

With regard to your "Head of the Class" story in the August issue, I think you went into the weeds. Until such time as electric cars have greatly increased range, a nationwide network of recharging stations, and better dealer support, they will remain a special-interest vehicle only. Your choice of the Tesla Model 3 as the class winner fell short of the mark. I think the conventionally powered Genesis G70 should have captured the top spot. It hit all the bases for performance, design, comfort, dealer support, and ease of refueling. It also taught BMW a lesson along the way.

Henry Smith

Sorrento, Maine

The Model 3 LRAWD has all three of the things you mentioned: more than 300 miles of range (making it competitive with the BMW and Genesis), thousands of

Superchargers spread across the world for long-distance trips (and at-home recharging to handle your daily needs), and about as many dealerships (or "stores," as Tesla calls them) as Genesis has. The G70 is a great car, but when it comes to the Tesla, it, like the Bimmer, is outmatched.—Ed.

Ouch! Trust me, I'm passionate about cars. And I vividly remember how the BMW 5 Series was my dream car. That was 20-some years ago! Have they screwed it up, or what? Sure, Bangle was a disaster, but some people way above his paygrade greenlit his ideas.

Now to see a Hyundai beat a 3 Series? Deep down, I want to cry! But guys, really: You got what you deserved! And it's gotta hurt. Anyway, it hurts me, but in an OK kind of way.

Keep up the objective work,
MotorTrend!

Eric Ellyson

Saint-Lucien, Québec

Old but Not Forgotten

After reading "Rearview" about the August 1969 issue and its reference to the 1970 Barracuda, it brought back memories of shuffling through old MT issues at my annual church fair. I quickly purchased a copy online. It is incredible the parallels between 1969 and today from electric cars, automation, and parts ubiquity ("International Rolls"). Dr. Lotz's speculation of a possible merger between VW and Mercedes-Benz was an interesting read, as was the reference to a "Saab Story" in the reader submissions.

David Bonebreak
via email

I appreciate the level of craftsmanship that Toyota puts into its executive luxury Century sedan. Clearly they pay incredible attention to detail with things like the lacquer-level paint and the wool seats. But one thing can't escape me: Why does the interior design layout look more like a 1983 Ford LTD than a Rolls-Royce or Bentley?

Gary Jungling
Gilroy, California

The Gang Reignites the Rivalry

Your August comparison test of the Camaro SS and Mustang GT convertibles

was a pleasure to read, until I came across your comments about the front ends of the cars. I can understand why someone might not like the refreshed look of the Camaro, but to say the Mustang is so much better? Really? If you like the droopy eyes of a flathead catfish, I guess you would.

Jim Busch

Washington, Illinois

I just received my August issue and was excited to read the Camaro vs. Mustang comparison, as I am considering them for my next convertible. It baffles me as to why a respected publication like *MotorTrend* would have someone who admittedly dislikes convertibles write the story, which was the case here with Christian Seabaugh. That's like sending someone out to review a seafood restaurant who is allergic to seafood.

Convertibles are a passion! I'm recently retired and own two convertibles now and have had more than 10 convertibles in my lifetime. Open-air driving or riding a motorcycle on a twisting mountain highway is still one of my biggest thrills.

Reader on location

Our last reader on location of 2019 is **Linda Foshey** of Sussex, Wisconsin, who writes on behalf of her daughter, **Jennifer**. "We've been subscribers/readers of *MotorTrend* for many years now. Our daughter, Jennifer, recently studied abroad in Tanzania. Her carry-on included a *MotorTrend* for good reading. This picture was taken at Olduvai Gorge, Tanzania, which is a famous location for its anthropological and archeological discoveries. She also took educational safaris in the Serengeti and Lake Manyara and Tarangire National Parks."



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This is why power winches and heated seats exist. Also why some dream of convertibles.

My next beef with Christian is that right up front he disrespects the Camaro as being ugly. Again, I like both vehicles, but by the pics shown I think the Camaro might actually look better.

I think Christian needs to go back to *Good Housekeeping* or *Seventeen* or whatever magazine he came from because he has no business reviewing nice convertibles.

Barry Vlach

Chandler, Arizona

It's true that Christian doesn't love droptops, but he's still more interested in convertible coupes than convertible cribs. Regardless, he's not allergic to them. He simply prefers a stiffer, lighter, higher-performance coupe with a fixed roof. At any rate, enjoy your next droptop, and don't forget the sunscreen.—Ed.

Thanks for the well-written Camaro vs. Mustang convertible comparison.

The specific output of the 5.0-liter Mustang V-8 (92 horsepower/liter) is 26 percent higher than the 6.2-liter Camaro V-8 (73 hp/liter), and it's creeping up on the Shelby GT350's specific output (101 hp/liter). Naturally aspirated, high-strung, eager-to-rev engines like this are becoming a rarity. Congratulations to the Ford team for providing an affordable, "follow your throttle foot" engine whose wail at 7,000-plus rpm makes enthusiasts smile.

It looks like the tops were down for the entire test, which is the point of a convertible, especially in California.

Gregory E. Peterson

via email

On an MT Garage Favorite

I enjoyed Christian Seabaugh and Scott Evans' story on rescuing a camper and the evening with the Ram 2500 Power Wagon (Garage, September). Up here in Canadian winters, I do that fairly often; it makes me feel like a good-deeder. Having a Power Wagon with its stock 12,000-pound winch and its locking differentials would make it so much easier for me.

It was interesting how technical Evans had to be to satisfy the readers that he knew the RV's weight, the winch capacity, and recovery points. I would have been like, "This should work—it's a damn 12,000-pound winch!" But I know how testy your readers are.

Been enjoying the magazine for about 30 years and like it better than *Road & Track*; I enjoy the humor (and a little swear word tossed in doesn't hurt, either).

Jim Langlois

Brandon, Manitoba

As you said, you know how testy our readers are. Even with the research Evans did before yanking that RV out of the snow, we had quite a few keyboard warriors voicing their complaints. Stay warm!—Ed.

RIP, New Car Buyer's Guide

After being a *MotorTrend* subscriber for over 57 years, I must say I was very unhappy with the October New Car issue, the biggest disappointment in a long time. It doesn't compare to the last few years. Give us more specs and less opinion.

Jimmy Deese

Crescent City, Florida

If you still have a soul, print this.

I like *MotorTrend* magazine. As the years go by, I like it less and less. Could be a demographic thing, getting older and becoming a technological dinosaur. I recognize that producing *MotorTrend* is a juggling act. Not enough readers, game over. No cooperation or advertising dollars from the manufacturers, game over. But how much can things be watered down until there is nothing left?

The New Car issue is the automotive consumers' 12-month bible. Whatever bones your readers had to pick with you, this was the saving grace. Make, model, engine, trans, weight, final drive ratio, price, and the pièce de résistance, the stars. I'm guessing the manufacturers who didn't get enough stars made some unpleasant remarks, or worse. We recall how you solved that problem. Pause before you go into knee-jerk reaction mode with some nuclear hyperbole.

Hello, October 2019 New Car issue. As the politician from Utah was heard to say about the politician from Vermont, "all hat and no cattle." The stars went away, regrettable but somewhat understandable. We still had a mention of each vehicle and some watered-down information. Yes, I realize that the number of vehicles and the amount of facts have evolved into a staggering volume that cannot be condensed in the old format.



I am disappointed. Down and dirty was not the way to go. I have come to expect better from *MotorTrend*.

Martin Rubenson

Maple Shade, New Jersey

We assure you, Martin, we are still in full possession of our souls, and that was a contributing factor in our decision. As useful as the buyer's guide can be, it is also a soulless piece of work. Because all of that information is available elsewhere and constantly updated, we decided to focus our attention on what our readers can't find anywhere but with MotorTrend.—Ed.

And a couple of corrections

I really enjoyed the August issue (as I do each one). I was pleasantly surprised when I turned to page 74 and saw the two-page picture of the Rolls-Royce in Manhattan ("Yankee Rolls").

One small correction. I believe that's the Williamsburg Bridge, not the Manhattan Bridge. You see, the reason I was pleasantly surprised is that I live in the building to the left of the Rolls!

Andrew Wender

New York, New York

You're right! The New Yorker on staff is embarrassed to have missed that. Indeed, the Rolls-Royce Phantom is pictured crossing the Williamsburg Bridge from Manhattan toward Brooklyn. Completed in 1903, the Williamsburg Bridge actually predates the Manhattan Bridge, and thus, it's even more likely that the first Rolls to cross it came from Springfield, Massachusetts.—Ed.

Wow! Is the EPA city mpg for the 2020 Hyundai Palisade really 119 mpg as reported by *MotorTrend* on page 18 of the October 2019 print issue?

Gregory Snider

Cincinnati, Ohio

In a word, no. The Palisade is actually EPA-rated at 19/26/22 mpg city/highway/combined with front-wheel drive and 19/24/21 mpg with all-wheel drive.—Ed.



**ON TO
BIGGER
THINGS**

FUNCTIONS AS A CONVENTIONAL TAILGATE
OPENS CARGO-DOOR-STYLE WITH 60/40 SPLIT
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ECLECTIC AVENUE



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Road Test Editor

RANDY POBST

Champion Racing Driver

JETHRO BOVINGDON

Head 2 Head Host

JONNY LIEBERMAN

Head 2 Head Host

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Features Editor

CHRISTIAN SEABAUGH

Features Editor

FIVE COUNTRIES, 12 CRAZY-FAST VEHICLES, ONE WINNER

Each year's Best Driver's Car field takes a different form. Last year, the story revolved around the three supercars that obliterated the existing WeatherTech Raceway Laguna Seca lap record for a street-legal vehicle. We also had the first-ever SUV in the field.

Often, Best Driver's Car is a roster of that year's two-door exotics. This

year was ... different. Sure, we had the equivalent of a street-legal race car in the McLaren Senna, which would take last year's lap record and leave it in the marbles. (*Spoiler alert much?*) But we also had a collection of more, shall we say, eclectic vehicles, including an SUV whose performance would have shattered the BDC field five years ago. We had a couple grand tourers in the venerable

sense, some bahn-storming supersedans, and a certain tire-melting hooligan from Detroit that readers have begged us to include for years.

The 2020 Best Driver's Car field priced out at \$2,759,014. Granted, a cool million of that figure was the Senna, but although many of the sticker prices resided in the six-figure realm of the One Percent, we also had a couple vehicles

MOTORTREND BEST DRIVER'S CAR 2019

Be sure to check out MotorTrend.com and MotorTrendOnDemand.com for more Best Driver's Car content plus tons of in-car videos from Randy and our *Head 2 Head* hydra of Jonny Lieberman and Jethro Bovingdon.

WORDS MARK RECHTIN PHOTOGRAPHS MOTORTREND STAFF



THE FIELD

ASTON MARTIN DBS SUPERLEGGERA • BENTLEY CONTINENTAL GT V8
BMW M2 COMPETITION • BMW M850I XDRIVE COUPE
DODGE CHALLENGER SRT HELLCAT REDEYE
FORD MUSTANG SHELBY GT350 • JAGUAR XE SV PROJECT 8
LAMBORGHINI URUS • McLAREN SENNA • MERCEDES-AMG GT 63 S 4MATIC+
PORSCHE 911 CARRERA S • TOYOTA GR SUPRA

reachable by The Rest Of Us. And as we all know, rooting for the underdog can be so much more fun.

Each of our 12 vehicles endured a battery of tests at our Fontana, California, proving ground at Auto Club Speedway. We then took a daylong winding route from Los Angeles up along California's coast and through its central valley, parking ourselves at

the foot of State Route 198. Thanks to the diligence of the California Highway Patrol and the patience of hundreds of inconvenienced motorists, we intermittently shut down 4.2 miles of this rolling, jolting, turbulent hill climb for a day, blasting exhaust notes off the surrounding foothills. From there, we trundled up to scenic Monterey, location of the aforementioned

world-famous Laguna Seca, where our staff's hottest shoe—champion racer Randy Pobst—set hot lap times that no mere mortal (including automaker test drivers) could ever hope to achieve.

The winner may not be the fastest in a straight line, nor the quickest around the racetrack. But it will be the best car to drive, both to the track and around it. ■

BEST DRIVER'S CAR

DAY 1

WORDS JONNY LIEBERMAN
PHOTOS MOTORTREND STAFF

MOTORTREND



THE LONG WAY UP

I eased the gassed-up BMW M850i into the *MotorTrend* parking lot just before 7:30 a.m. We weren't leaving until 8, but with the exception of deadlines, I have a real issue with being late.

Parked sideways across three spots in the back lot sat the \$982,816 purple and orange McLaren Senna. I nosed the M850i up to the odd-looking beastie, taking up an additional three spots, and sat for a moment to contemplate the diversity of the 2019 Best Driver's Car field. A Toyota, a Bentley, a Lamborghini SUV, a Mustang (albeit a Shelby), a pocket rocket BMW, and a great big personal luxury coupe of a BMW. Plus, you know, the Senna.

Can we make this work? My thoughts (and the last moment I'd have to myself for the next week) were interrupted by photographer William Walker not so subtly pulling up in the never-subtle Dodge Challenger SRT Hellcat Redeye, a big ol' American boat that produces 8 more horsepower than the

789-hp Senna. Slowly but surely, the rest of the gang turned up along with the rest of the dozen cars, all 6,938 horsepower and a couple Woodrow Wilsons shy of \$3 million in sheetmetal and carbon fiber. Yeah, we're good.

The plan for day one of this year's Best Driver's Car was to drive all the competitors from our HQ in El Segundo up to Paso Robles, the center of California's Central Coast wine region. Why there? Paso is pretty close to where we'd be starting day two, the notorious State Route 198. Also, the yummy Firestone Walker Brewing Company taproom restaurant is pretty close to the hotel, and an army marches on its stomach. But I'm getting ahead of the program.

The drive was not to be a straight shot. The idea was that we'd stop every half hour or so and switch cars to give all nine judges seat time in as many cars as possible. This way we'd be able to see what the BDC contenders are like in the real world, or our close approximation of it.



Sure, the Hellcat Redeye uses plenty of gasoline, but it makes 797 horsepower. We ain't mad at it.

Road test editor Chris Walton was tasked with coming up with a route that would attempt to avoid freeways as much as possible and take advantage of as many sadly taken-for-granted California back roads as we could in a single day. After we squirted up the 405 freeway and out onto Interstate 10 (executive editor Mark Rechtin alternately sulking and panicking in the uncompromising/deafening Senna while dodging erratic morning traffic), we emerged onto Pacific Coast Highway and aimed for Malibu.

I'll never know exactly why, nor will I be able to explain it, but driving next to water is better than not driving next to water. That's just how it is. Also, via the luck of the draw, I was assigned the perfect weapon and got to drive through Santa Monica, Pacific Palisades, and much of Malibu in the kinda ocean blue Hellcat. What a treat.

Equal parts comfy, soft, hysterical, ridiculous, and awesome, the Hellcat is one of those cars that—even though we were all pretty sure it wasn't going to win—we'd all like to see in BDC. For a variety of reasons, in our BDCs from 2015 to 2018, the stars never quite aligned. This year? Redeye Widebody, baby! We saved the best Hellcat for last, and as far as we know, it's the last one we're going to see. Anyhow, I was loving life.

We pulled over near Leo Carrillo State Park to switch cars. As our posse stood around Instagramming, a loud Camaro club/gang passed us. Mostly driving supercharged sixth-gen cars and/or ones that had been demuffled in some way, the Chevy boys wanted us to share in their joy of running PCH. Ahh, the intoxication of youth and cheap horsepower.

Once back underway, we came up on the Camaro club, similarly pulled off in

This year's field: 6,938 horsepower and a couple Woodrow Wilsons shy of \$3 million in sheetmetal and carbon fiber.



A nervous editor is pleasantly surprised that the Bentley handled zero g so well.

California, we're going to keep that location a secret.)

After our pack politely rumbled through Ventura, next up was the incredible, winding Route 33, which rambles up through and out of Ojai, all the way until it connects with the 166. To understate it by two or three orders of magnitude, we had fun. "Driving the M2 aggressively in the twisties felt like caning the flanks of a willing racehorse," special guest judge and pro racer Randy Pobst said. "Hyah!"

In fact, the great little BMW M2 Competition generated quite a bit of buzz. Problem is, this car finished third out of three behind a Porsche Cayman and a winning Toyota Supra in a comparison test just a couple months earlier. And by this car, I mean *this* car. "According to its VIN, this is the same M2 Competition we had for the 718 Cayman/Supra comparison," Walton said. "But it feels like a sweetheart today: alert, pointy, planted. I can confidently trail-brake it into a corner."

There was more continuity trouble, too. Namely, many of us felt there was something wrong with the Supra (though it had a different VIN from the test winner). "The Toyota Supra should have been

a big turnout. "Jethro!" I shouted over the walkie. "Do a burnout." Mr. Bovingdon just so happened to have rotated into the Hellcat Redeye, and he just so happens to be the kind of guy who turns traction control off every time he sits in a car. Jethro lit 'em up and produced the biggest, dumbest, most immature and glorious cloud of eviscerated tire you ever did see.

As luck would have it, I was right behind him in the Shelby GT350, and I literally couldn't see out of the car as I drove through the fresh cloud. Tee-hee! (In the interest of being comprehensive, Rehtin managed to perform an even more juvenile Hellcat burnout later in the day, but as I'm not sure about the statute of limitations on air quality violations in



We were feeling anything but blue. An entire day spent tearing up beautiful California back roads lifts all spirits.

Day 1 | BEST DRIVER'S CAR

What beats youth and exuberance, again? Angus and Randy, everybody!

The view from inside the Lamborghini Urus looking out at the McLaren Senna. Yes, even we're jealous of us.

quick and nimble," international bureau chief Angus MacKenzie said, "but it felt strangely discombobulated, ducking and weaving all over the road like a bloodhound on amphetamines." I experienced the exact same thing. Hmm.

But for the most part, the cars shined. At one point on the tortuous Route 58, Pobst was chasing me and the yellow Porsche 911 from behind the wheel of the track-focused Jaguar Project 8. "You got it up on three wheels, Jonny!" Randy boomed over the walkie. Go me!

Then we heard an English-inflected Australian voice: "Anyone know how to put the Hellcat in Sport mode?" To our sheer amazement, Angus and the 4,500-pound Dodge were keeping up with us. And he was in *Comfort* mode. Our drive came to a halt when somebody (name redacted) put the Bentley Continental

GT a bit too airborne over a sudden rise and thought he heard something break. Turned out, all was fine, but we slowed things down from there on out. Besides, we only had a few miles to go at that point.

Aside from the Hellcat, a few of the cars stood out, namely the Shelby (Walton: "Buttoned down and sporty in a way that no muscle car has a right to be."); the gorgeous, slithery Aston Martin DBS (features editor Scott Evans: "Monstrously powerful engine. Hall of fame stuff."); the AMG GT 63 S (Pobst: "So light on its feet, much more like a sports car than a sizable sedan."); the Lamborghini Urus (Rechlin: "Essentially a lifted supercar that can carry three of your friends and many cases of wine. How is this *not* the best driver's car?"); and of course the Porsche 992 911 (Everyone: "Incredible.").

We rolled into Paso Robles, filled our faces with Firestone's finest, and hammered out our BDC rankings for the day. Unless you're insanely lucky, you have to drive to reach your favorite road or track, so it's about the journey as much as the destination. ■

Day 1 standings

- 1 Porsche 911 Carrera S
- 2 Ford Mustang Shelby GT350
- 3 Dodge Challenger SRT Hellcat Redeye
- 4 Mercedes-AMG GT 63 S 4Matic+
- 5 Aston Martin DBS Superleggera
- 6 Bentley Continental GT V8
- 7 McLaren Senna
- 8 Lamborghini Urus
- 9 BMW M2 Competition
- 10 Jaguar XE SV Project 8
- 11 BMW M850i xDrive Coupe
- 12 Toyota GR Supra

Randy was chasing me and the 911 from behind the wheel of the Jaguar Project 8. To our sheer amazement, Angus and the 4,500-pound Hellcat were keeping up—in *Comfort* mode.

DAY 2 WHAT GOES UP

The second day of Best Driver's Car began right on schedule. All nine judges and (more important) 12 cars arrived on time, as did three members of the California Highway Patrol. Good part is, the officers were on our side, as we had a slithery 4-mile hill climb of State Route 198 permitted for video and photographic purposes, and as such we would have their assistance in intermittently closing the road.

Hey, man, safety first. Well, OK, maybe not exactly *safety*, but we wanted to eliminate the possibility of an innocent party being involved *if* something went wrong. Self-inflicted injury? It's a dirty job filled with risks, but 12 of the best new performance, sports, and supercars ain't gonna drive themselves. Yet.

Due to some inside baseball *mishegas*, instead of our usual cadre of 12 judges, for 2019 we went with only nine. For some reason, I was very worried about this fact until I realized that having only nine judges looping per road closure meant that each run took only 75 percent as long as in years past. Work smarter, not harder, and all that. Was the outcome in

any way impacted by having fewer drivers driving the car? Naw. If anything, it made us a more efficient unit and saved a bit of wear and tear on the cars. Oh, right, the cars! Let's get to it.

After one run, the Mercedes-AMG came down the hill with smoke billowing from its brakes. Not a good sign, but if you'll allow me the fleeting pleasure of tossing one of my colleagues under the proverbial bus, Scott Evans was driving, and, well, he does that.

Smoking brakes aside, the AMG rocked on 198. "Sure, it's heavy and solid as a bank vault, but it tears up the asphalt as though it's mad at the earth," Mark Rechtin said. "Its baritone engine note is menacing, its cornering fleet and nimble like Lawrence Taylor at his peak, and its brakes confident (though a bit thin and prone to igniting under intense labor). Plus, it has great rear-seat room and a thunderous stereo to regale your passengers with Wagner as you blast toward your destination."

I'm sure Rechtin would play something else if you asked nicely. Angus MacKenzie said much the same: "Stunningly fast both up and down Route 198, the AMG GT 63 S feels like a genuine four-door sports car, not a sedan gussied up to look like one."

The car that I found most shocking was the Bentley. There was a time when even inviting a Bentley to Best Driver's Car caused a flurry of nasty internal emails ("Too big!" "Too luxury!" "Your mama!"). But, I assure you, the third-generation



Continental GT—the one riding on the Porsche-engineered MSB platform—will forever quash that argument.

We were caning the 4.0-liter V-8 version, which makes *only* 542 horsepower as opposed to the 626 ponies of the 6.0-liter W-12 edition. Now, here's the point where I normally say, "Sure, the power is down, but the GT V8 weighs so much less." Only it doesn't. The big 12-banger only weighs 91 pounds more than the green guy we have. Laughably, the Lamborghini Urus SUV weighs but 3 pounds more than the GT V8. Despite



MUST RACE DOWN

WORDS JONNY LIEBERMAN

Lamborghini and Dodge present their interpretations of fast, fun family transport.

"It's solid as a bank vault, but it tears up the asphalt as though it's mad at the earth, and it's nimble like Lawrence Taylor at his peak."

that, what a machine! To me, the Continental drove like a Nissan GT-R wrapped up in 14 cows' worth of green leather.

I suppose I shouldn't get too much further without mentioning the \$992,816 British elephant in the room, the Senna. Here's what Chris Walton had to say (and this man has been driving and testing cars professionally for nearly

25 years): "I never thought I'd see a Senna, much less drive one, unleashed, on a closed road, without a McLaren handler riding shotgun. On Route 198, the Senna was a life-changing drive."

Perhaps Walton was alone in his bewitchment? Let's ask pro driver Randy Pobst, who should be well jaded about such things: "I was utterly seduced by



Road test editor Chris Walton learns the intricacies of the McLaren Senna before launching up Route 198.





There are always casualties in battle. Fortunately, we come equipped with a first-class first-aid kit.

the extreme power, sounds, stick, and wild-child road attack of the outrageous Senna.” As for MacKenzie, the most tenured guy on staff: “Dancing the McLaren Senna over the lumps and bumps on Route 198, the corners come in a wide-eyed rush as I learn to trust the hand-of-god downforce and truly epic brakes.” Even editor-in-chief Ed Loh was

impressed: “The Senna was my first run up the hill, a drive I normally take relatively easy, to refamiliarize myself with 198. I ran up the hill in Sport and pushed myself. But the car? Not one bit. I saw 144 mph at the straightaway at the top of the hill and used that as a marker for the day. Never got within 10 mph of the Senna.”

Of course, there’s a counterpoint to the Senna love. “My favorite moment on 198 was getting out of the Senna and handing the keys to someone else,” features editor Christian Seabaugh said. “Actually, driving it up and down 198 was phenomenal—truly otherworldly. Babying it on fumes to King City and back for gas *sucked*. Hot, loud, uncomfortable. As an unabashed Viper lover, I’d normally say these things build character, but somehow the Senna takes the fun out of that.”

I’m more on Team Seabaugh vis-à-vis the Senna. Yeah, man, the performance

is bonkers. But \$600,000 more bonkers than the escaped mental patient McLaren 720S? I don’t think so. Rest assured, there was much disagreement. I wish I could leave you with what Evans wrote, but it’s literally uncut profanity. Let’s just say the car moved him.

If there were a trend to be spotted in 2019, it’s that our friends over in England are building some outstanding performance machines. Forget about the million-dollar McLaren and the Verde Bling Bentley, and check out the \$300K Aston Martin DBS Superleggera. I mean, just look at it. Since day one, I’ve been saying Marek Reichman’s masterpiece is the most beautiful car of the last 25 years. Great thing is, the Superleggera drives pretty dang sweet, especially once you find the annoyingly buried/hidden traction control menu and get it into Track mode.

As Loh said, switching into Track mode “flips the DBS from WWF to UFC.” To which Pobst added, “The gorgeous Aston DBS surprised me by its giant step forward in sporting drivability for a big luxury coupe from the brand, and pavement-wrinkling torque.” Amen to that torque!

Sticking with Britain, the Jaguar impressed, too. Especially its brakes,

“Dancing the McLaren Senna over the lumps and bumps on Route 198, the corners come in a wide-eyed rush as I learn to trust the hand-of-god downforce.”



which even Evans couldn't immolate. From Loh: "The Project 8 surprised me the most. It was born to attack roads like 198, with its unceasing uphill thrust, punctuated by snarling upshifts and otherworldly traction through corners."

At some point we scarfed *tripas* and asada tacos from our friends at King City's own Tacos la Potranca de Jalisco. (They'll perform roadside catering anywhere in California.) Most of the non-taco talk involved two cars that had emerged as our favorites: the wonderful Shelby GT350 and the we-knew-it-would-be-good-but-not-*this*-good Porsche 911.

"After experiencing the first three corners of supreme grip and confidence from the Shelby, I suspended the idea I was in a Ford product," Rechtin said. "For the rest of the run up and down the hill, I put myself in the mindset of driving an exotic car because the GT350's performance was to that standard. And it still excelled even when measured against cars costing thrice as much, never mind against previous Dearborn efforts." Taking vehicular lust to a new level, Seabaugh wants to marry the Shelby and have its baby.

Speaking of inappropriate metaphors, here's Walton on the Porsche: "Sweet, buttery, velvety, liquidy goodness, my goodness. It's unfailingly up to the task, and that gives me unlimited confidence. Wow, what a car."



The Shelby GT350 was the only BDC entry with a manual transmission.

That's basically what every judge had to say about the 992 iteration of the 911. Think I'm being lazy? Here's MacKenzie: "The 992-series 911 is thrillingly fast, telepathically responsive, and wonderfully communicative—all 911, all the time, yet more approachable and trustworthy at the limit than ever before."

So the issue becomes, how do you pick a winner between the excellent American and the *wunderbar* Porsche? A racetrack and our pro driver would settle it the very next day. ■

BEST DRIVER'S CAR | DAY 2

Day 2 standings

- 1 Porsche 911 Carrera S
- 2 Ford Mustang Shelby GT350
- 3 ↑ McLaren Senna
- 4 ↑ Jaguar XE SV Project 8
- 5 ↑ BMW M2 Competition
- 6 ↓ Mercedes-AMG GT 63 S 4Matic+
- 7 ↓ Bentley Continental GT V8
- 8 Lamborghini Urus
- 9 ↓ Aston Martin DBS Superleggera
- 10 ↑ BMW M850i xDrive Coupe
- 11 ↓ Dodge Challenger SRT Hellcat
- 12 Toyota GR Supra



DAY 3-5

We still pinch ourselves that the fine folks at WeatherTech Raceway Laguna Seca allow us full run of one of the planet's greatest racetracks, nestled in one of the most beautiful stretches of coastline in the world. Imagine winning that lottery, every summer.

If there's one part of our Best Driver's Car track days that I've seen change over the years, it's the level of manufacturer support. Back in 2011, the only OEM who sent a support team was Ferrari. This year, the only manufacturer who *didn't* was Toyota (besides, there was a tech from BMW there, so the Supra was covered). In short, car manufacturers are taking this event *seriously*.

What do these techs do? Put simply, they make sure the cars are in optimum condition when it's time for pro driver Randy Pobst to lay down his fast lap. That can mean anything from telling us ideal tire pressures and drive mode settings to swapping out worn (or broken) bits.

Isn't that cheating, the more conspiratorial among you might be asking? First, there are two kinds of racers: cheaters and losers. Plus, how much cheating could be done in full view of 60 *MotorTrend* staffers that wouldn't be painfully obvious? The carmakers are there to help, and we appreciate that help.

The automakers tend to be naturally competitive with one another, too. This manifests as an equipment arms race. If AMG shows up with a fully kitted-out white-black-and-lime-liveried Mercedes-Benz Metris complete with an espresso machine, Porsche fires back with hydraulic jacks and tire warmers.

If this year's Laguna days had a theme, it was failing to get things right the first time. Very occasionally, an OEM would look at a time Randy and our test team recorded and say, "We'd like to change something and try for a better time." Let me reword that. Nearly *all* the manufacturers ask for a second shot. We rarely allow it. This year was different, as three OEMs successfully pleaded their cases. See what you make of the results.

Most notable was the Senna. Talk about pressure. In 2018, Randy and the Porsche GT2 RS set the production car lap record around Laguna Seca: a blisteringly quick 1:28.30, beating a Porsche 918 Spyder by over a half-second. Although the \$294,000 911 isn't anyone's idea of cheap, the Senna costs almost \$700,000

LAP LAGUNA

WORDS JONNY LIEBERMAN



Would the second time around the track be the charm for the McLaren Senna?



more. The Senna also makes nearly 100 extra hp (789 vs. 691) and weighs about 340 pounds less (3,011 vs. 3,355).

We surmised the Brit would slaughter the Porsche. But it didn't. After the Senna's first laps, it eked out a quicker time than the GT2 RS. Just. Not even 0.2 second. It had just set the track record, but naturally, McLaren thought it (and we) could improve on a few things.

SECA/RELAP LAGUNA SECA



Each manufacturer makes sure the cars are in optimum condition when it's time for pro driver Randy Pobst to lay down his fast lap. Isn't that cheating?



The thing about McLaren is, it can develop a bit of tunnel vision. Forget the fact that there are 11 other cars present, all wanting attention. After much wheeling from the folks from Woking, we agreed to retest the Senna—but we had other cars to get through first.

Such as the 992 Porsche 911 Carrera S. Porsche used its tire warmers to great effect last year, when the toasty-tired

GT2 RS set the Laguna lap record *and* the record at Willow Springs, Road Atlanta, and Road America. But unlike the heat-loving R-compound tires on the GT2 RS, the new Carrera S wears street tires, and preheating them was a bad idea—the new 992 laid down a slower lap than the 991.2 Carrera S from two years ago: 1:36.40 for the old, 1:36.72 for the *neu*. That is ... *nicht gut*. Retest appeal No. 2 formally filed.



Meet the face of the new fastest production sedan around Laguna Seca: The Mercedes-AMG GT 63 S.



That the Supra's straight-six is sourced from BMW is old news by now. But it's new news that the Supra beats the M2 around Laguna.

How did the 335-hp, automatic-transmission Toyota beat the 405-hp, dual-clutch M car? Let's just say the Supra's power numbers are comically underrated.

It all came down to the McLaren. Not only had the hypercar struggled to beat a dominant yet (let's face it) garden-variety supercar, but the Senna had also bested the 720S it's based on by just 1.67 seconds (1:28.11 versus 1:29.78)—and that was with the Senna on Trofeo Rs and the 720S on ho-hum Pirelli Corsas. McLaren *had* to go faster. Much was on the line.

Laguna Seca is a tough circuit for a number of reasons. Although tracks like Road America reward top-end speed, Laguna Seca has only one long straight, so it rewards corner exit acceleration. If a car relies on downforce for lap times, Laguna Seca doesn't feature many sectors where downforce becomes a factor. Also, Laguna has three major braking zones within its 11 turns, so the track is hard on brakes, and cars that struggle to put the power down don't fare well. Route 198 taught us that brakes aren't an issue for



Foes in a comparison test just weeks before, BMW and Toyota renewed their rivalry around Laguna Seca.

One final retest candidate, the GT 63 S, struggled with tire pressures, and Randy just couldn't connect with the four-door coupe—at first. Too many modes or something. It was slower than the Jaguar Project 8, which set the Laguna Seca four-door lap record last year (with Randy at the wheel of a pre-production model). This time we put Randy in an all-kinks-ironed-out production version of the angry cat, and he popped off a 1:36.96 lap, improving on its record.

That was, until we re-lapped the GT 63 S with proper tire pressures: 1:36.26.

Congrats to Mercedes; you are now the quickest four-door.

As for the Porsche, with the tire situation sorted, the 992 popped off a remarkable 1:35.52 lap, beating the old version of itself by nearly a full second. That's progress. Speaking of progress, after being shown almost no love on Route 198, the Supra went to a dealer for a once-over. Given a clean bill of health, the red Zupra (get it, Z4 plus Supra?) felt much healthier when it was time for a lap. The crazy part? The Toyota beat the BMW M2 around Laguna, 1:40.57 versus 1:40.83.

The Mercedes-AMG and Jaguar prepare to descend Laguna's infamous Corkscrew.





Everyone in the pits held their collective breath. Fast lap not happening, tires losing grip ... boom.

PHOTO: QUANG TRAN

the Senna, but Randy had complained about oversteer when exiting corners. He'd spent too much time fighting the car.

One last time, out Randy went. Everyone in the pits held their collective breath. Warm-up lap, flat out onto the front straight, and then ... fast lap not happening, fast lap not happening again, and finally, on his last lap, tires just starting to lose grip ... boom. The Senna became the first production car to lap Laguna in less than 1 minute, 28 seconds, recording a 1:27.62.

That's a huge accomplishment until you realize the Senna's time still isn't quite 0.7 second quicker than the Porsche GT2 RS. Put another way, after being fettled over like a prima donna by a team of factory technicians flown in from England, the Senna still wasn't much quicker than a Porsche. But that's racing. Split seconds separate fastest from first loser.

When I was a sophomore in high school, our football team didn't lose a game. We didn't win every game, either, as we tied one. Call it undefeated-ish. I'm going to say to McLaren what Coach Shotlift said to the team as we took a collective knee in the end zone after winning that final game: "Well, men, you did it. You did it ugly, but you did it." ■

It takes a village ... to help set the production car lap record. Thanks to the lads from Woking for coming across the pond.



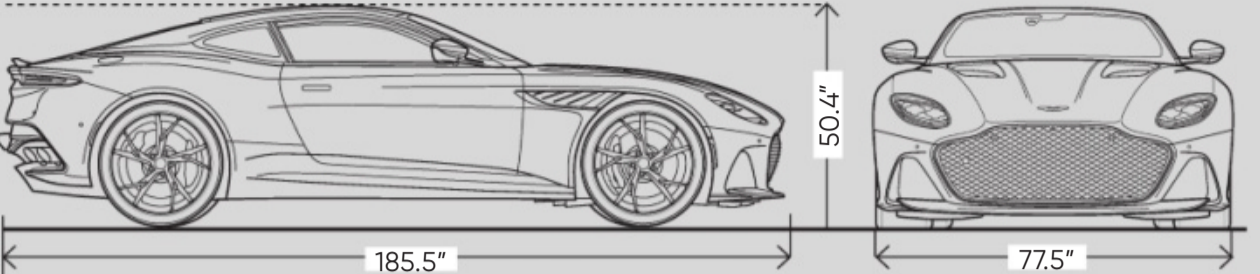
Thanks to our friends at Racepak, anyone who wanted could watch Randy's progress around WeatherTech Raceway Laguna Seca in real time. When the Senna rolled out, the crowd got much larger.



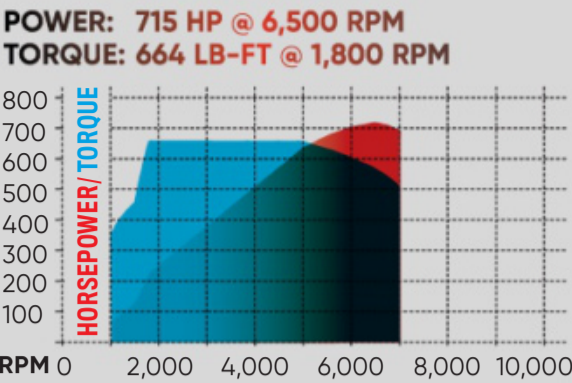
THE CONTENDERS...

ILLUSTRATIONS PAUL LAGUETTE

2019 Aston Martin DBS Superleggera

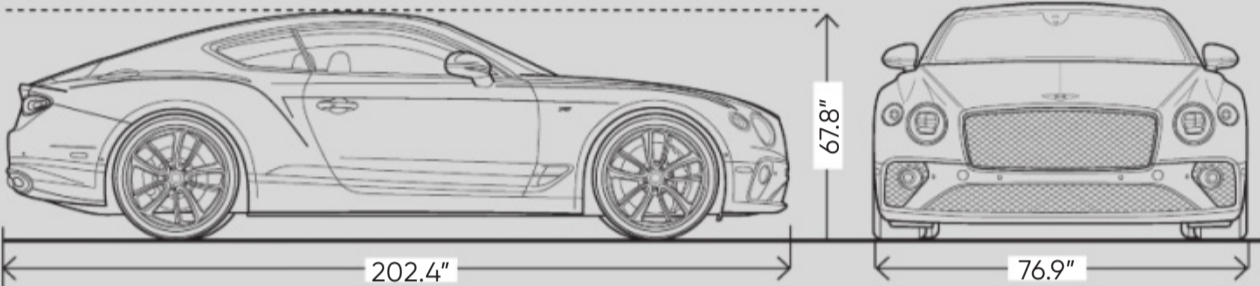


3.7 SEC	11.5 SEC @ 129.8 MPH	103 FT
0-60 MPH	QUARTER MILE	BRAKING DISTANCE 60-0 MPH

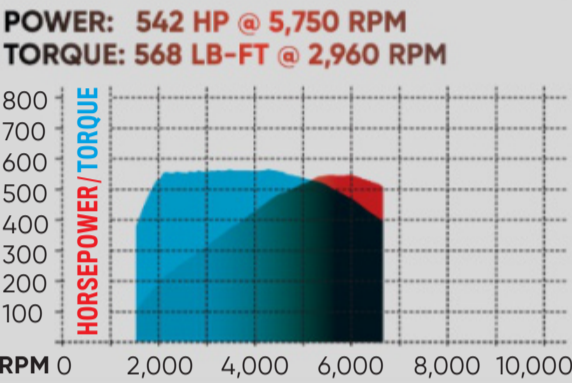


Base Price \$308,081 Price As Tested \$335,586 Vehicle Layout Front-engine, RWD, 4-pass, 2-door coupe Engine 5.2L/715-hp/664-lb-ft twin-turbo DOHC 48-valve V-12 Transmission 8-speed automatic Curb Weight (F/R Dist) 4,186 lb (51/49%) Wheelbase 110.4 in Lateral Acceleration 1.02 g (avg) Suspension, F; R Control arms, coil springs, adj shocks, anti-roll bar; multilink, coil springs, adj shocks, anti-roll bar Brakes, F; R 16.1-in vented, drilled 2-pc carbon-ceramic disc; 14.2-in vented, drilled 2-pc carbon-ceramic disc, ABS Wheels, F; R 9.5 x 21-in; 11.5 x 21-in forged aluminum Tires, F; R 265/35R21 101Y; 305/30R21 104Y Pirelli P Zero A7A

2020 Bentley Continental GT V8

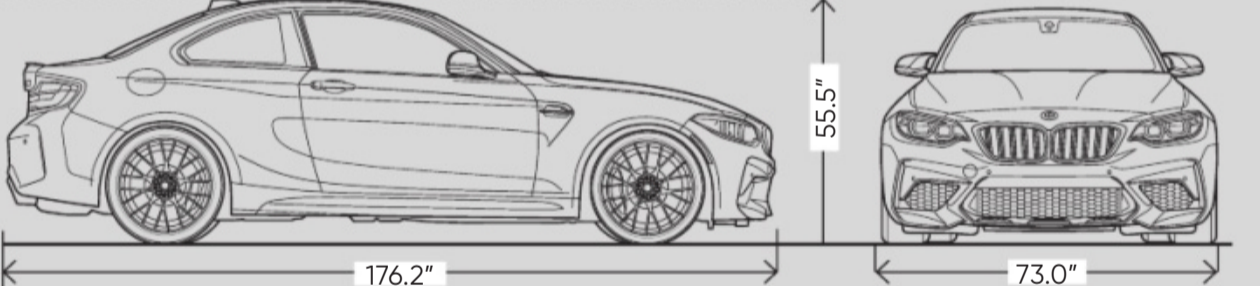


3.3 SEC	11.7 SEC @ 119.3 MPH	103 FT
0-60 MPH	QUARTER MILE	BRAKING DISTANCE 60-0 MPH

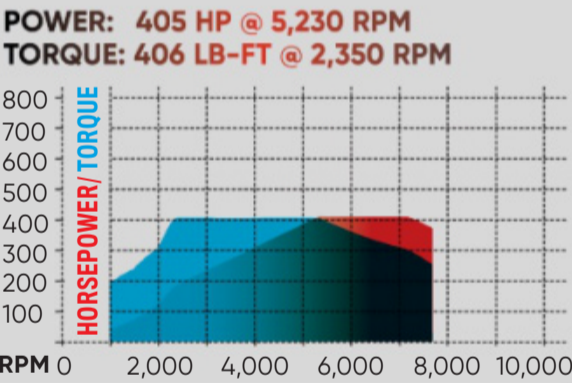


Base Price \$201,225 Price As Tested \$255,805 Vehicle Layout Front-engine, AWD, 4-pass, 2-door coupe Engine 4.0L/542-hp/568-lb-ft twin-turbo DOHC 32-valve V-8 Transmission 8-speed twin-clutch auto Curb Weight (F/R Dist) 4,928 lb (53/47%) Wheelbase 112.2 in Lateral Acceleration 0.97 g (avg) Suspension, F; R Control arms, air springs, adj shocks, adj anti-roll bar; multilink, air springs, adj shocks, adj anti-roll bar Brakes, F; R 16.5-in vented 2-pc disc; 15.0-in vented disc, ABS Wheels, F; R 9.5 x 22-in; 11.0 x 22-in forged aluminum Tires, F; R 275/35R22 104Y; 315/30R22 107Y Pirelli P Zero B

2019 BMW M2 Competition

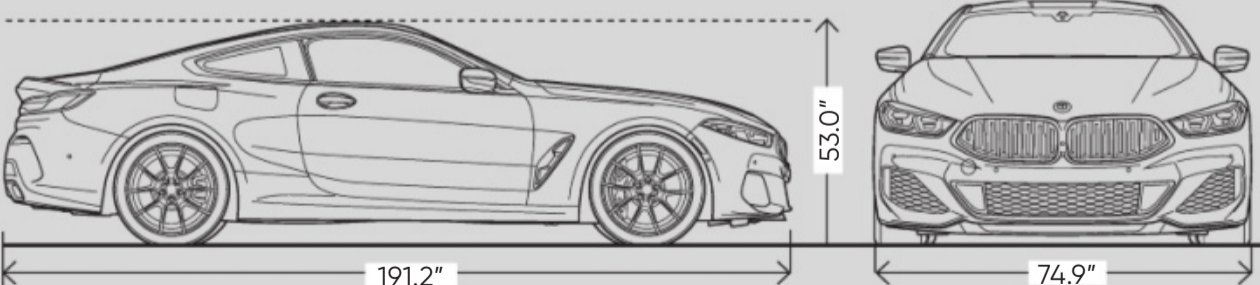


4.0 SEC	12.4 SEC @ 114.7 MPH	106 FT
0-60 MPH	QUARTER MILE	BRAKING DISTANCE 60-0 MPH

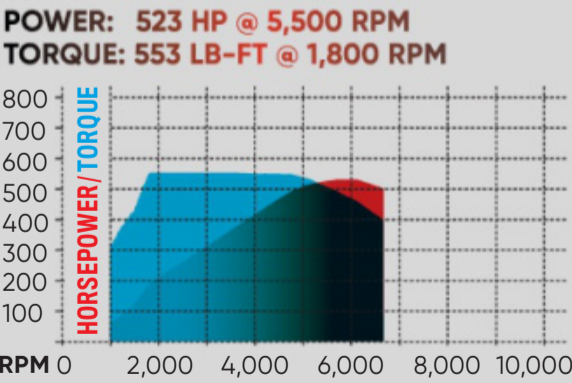


Base Price \$59,895 Price As Tested \$67,045 Vehicle Layout Front-engine, RWD, 4-pass, 2-door coupe Engine 3.0L/405-hp/406-lb-ft turbo DOHC 24-valve I-6 Transmission 7-speed twin-clutch auto Curb Weight (F/R Dist) 3,613 lb (53/47%) Wheelbase 106.0 in Lateral Acceleration 1.01 g (avg) Suspension, F; R Struts, coil springs, anti-roll bar; multilink, coil springs, anti-roll bar Brakes, F; R 15.7-in vented, drilled 2-pc disc; 15.0-in vented, drilled 2-pc disc, ABS Wheels, F; R 9.0 x 19-in; 10.0 x 19-in forged aluminum Tires, F; R 245/35R19 93Y; 265/35R19 98Y Michelin Pilot Super Sport (star)

2019 BMW M850i xDrive Coupe



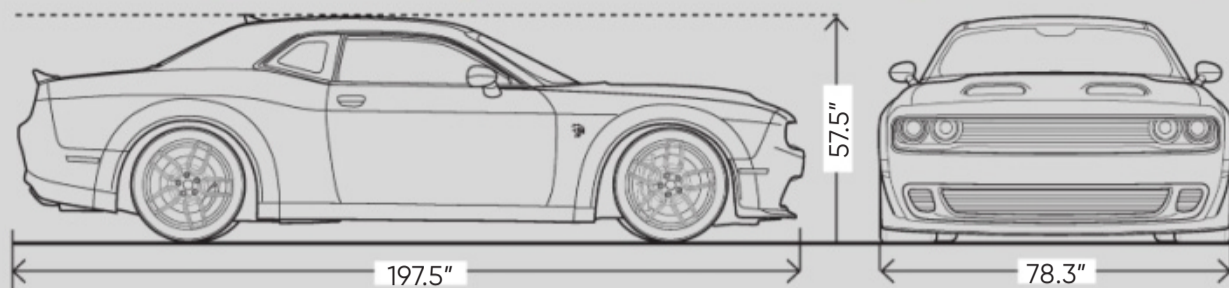
3.5 SEC	11.9 SEC @ 116.1 MPH	107 FT
0-60 MPH	QUARTER MILE	BRAKING DISTANCE 60-0 MPH



Base Price \$112,895 Price As Tested \$119,295 Vehicle Layout Front-engine, AWD, 4-pass, 2-door coupe Engine 4.4L/523-hp/553-lb-ft twin-turbo DOHC 32-valve V-8 Transmission 8-speed automatic Curb Weight (F/R Dist) 4,365 lb (55/45%) Wheelbase 111.1 in Lateral Acceleration 0.99 g (avg) Suspension, F; R Control arms, coil springs, adj shocks, adj anti-roll bar; multilink, coil springs, adj shocks, adj anti-roll bar Brakes, F; R 15.6-in vented disc; 15.7-in vented disc, ABS Wheels, F; R 8.0 x 20-in; 9.0 x 20-in cast aluminum Tires, F; R 245/35R20 95Y; 275/30R20 97Y Bridgestone Potenza S007 (star)

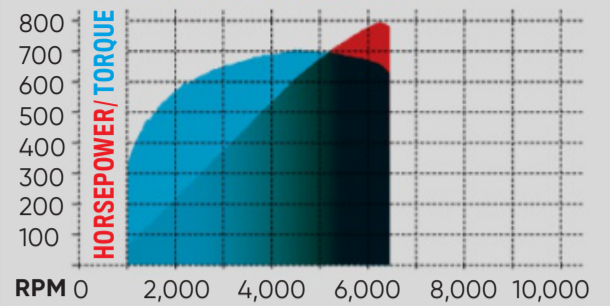
BEST DRIVER'S CAR

2019 Dodge Challenger SRT Hellcat Redeye (Widebody)



3.8 SEC	11.8 SEC @ 126.1 MPH	102 FT
0-60 MPH	QUARTER MILE	BRAKING DISTANCE 60-0 MPH

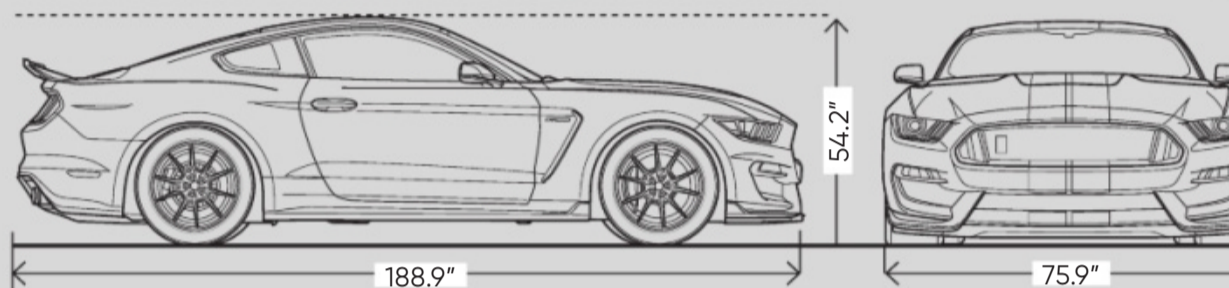
POWER: 797 HP @ 6,300 RPM
TORQUE: 707 LB-FT @ 4,500 RPM



24.7 SEC @ 0.80 G (AVG)
MT FIGURE EIGHT

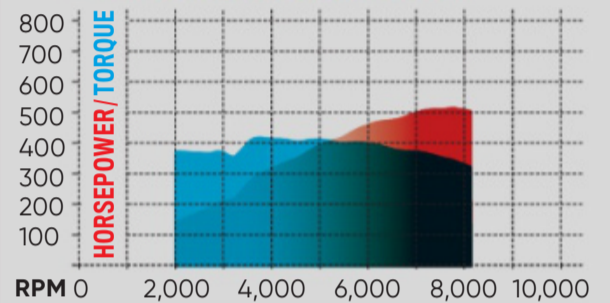
Base Price \$73,190 Price As Tested \$91,914 Vehicle Layout Front-engine, RWD, 4-pass, 2-door coupe Engine 6.2L/797-hp/707-lb-ft supercharged OHV 16-valve V-8 Transmission 8-speed automatic Curb Weight (F/R Dist) 4,505 lb (57/43%) Wheelbase 116.2 in Lateral Acceleration 0.96 g (avg) Suspension, F; R Control arms, coil springs, adj shocks, anti-roll bar; multilink, coil springs, adj shocks, anti-roll bar Brakes, F; R 15.4-in vented, grooved 2-pc disc; 13.8-in vented, grooved disc, ABS Wheels 11.0 x 20-in forged aluminum Tires 305/35R20 107Y Pirelli P Zero

2019 Ford Mustang Shelby GT350



4.0 SEC	12.3 SEC @ 117.0 MPH	95 FT
0-60 MPH	QUARTER MILE	BRAKING DISTANCE 60-0 MPH

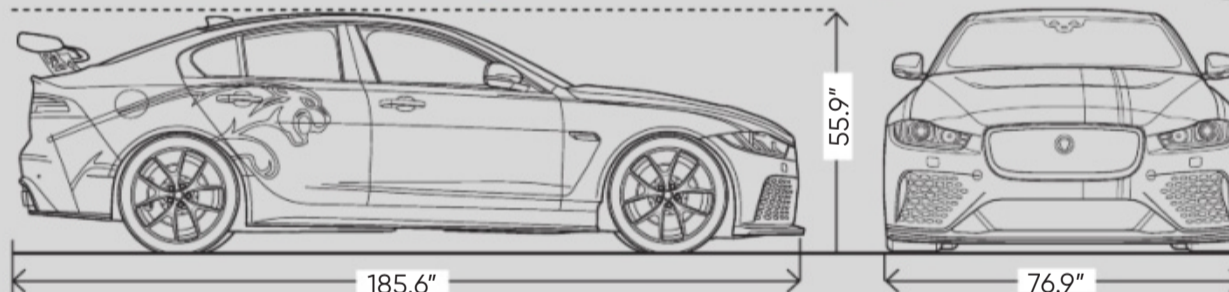
POWER: 526 HP @ 7,500 RPM
TORQUE: 429 LB-FT @ 4,750 RPM



23.6 SEC @ 0.83 G (AVG)
MT FIGURE EIGHT

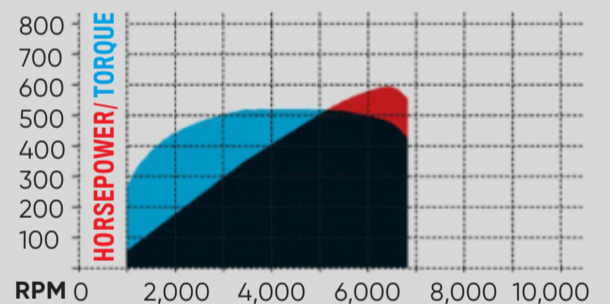
Base Price \$61,535 Price As Tested \$64,880 Vehicle Layout Front-engine, RWD, 4-pass, 2-door coupe Engine 5.2L/526-hp/429-lb-ft DOHC 32-valve V-8 Transmission 6-speed manual Curb Weight (F/R Dist) 3,825 lb (53/47%) Wheelbase 107.1 in Lateral Acceleration 1.04 g (avg) Suspension, F; R Struts, coil springs, adj shocks, anti-roll bar; multilink, coil springs, adj shocks, anti-roll bar Brakes, F; R 15.5-in vented 2-pc disc; 15.0-in vented 2-pc disc, ABS Wheels, F; R 10.5 x 19-in; 11.0 x 19-in cast aluminum Tires, F; R 295/35R19 104Y; 305/35R19 106Y Michelin Pilot Sport Cup 2

2019 Jaguar XE SV Project 8 (Track Setup)



3.4 SEC	11.7 SEC @ 120.6 MPH	105 FT
0-60 MPH	QUARTER MILE	BRAKING DISTANCE 60-0 MPH

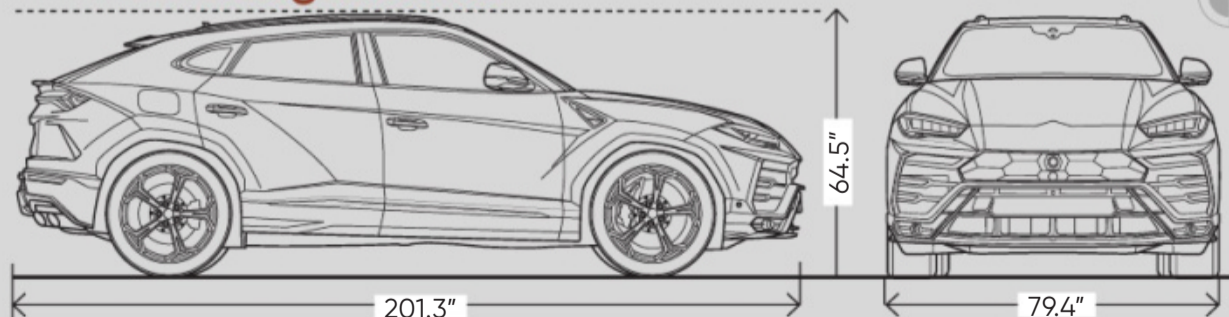
POWER: 592 HP @ 6,500 RPM
TORQUE: 516 LB-FT @ 3,500 RPM



23.3 SEC @ 0.88 G (AVG)
MT FIGURE EIGHT

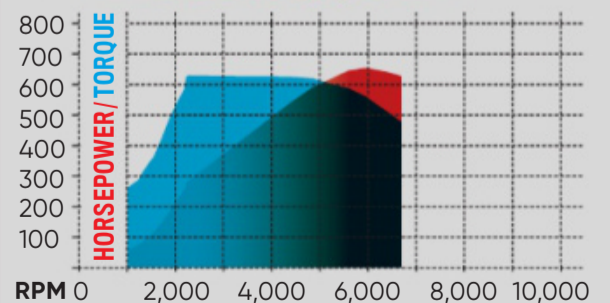
Base Price \$188,495 Price As Tested \$188,495 Vehicle Layout Front-engine, AWD, 4-pass, 4-door sedan Engine 5.0L/592-hp/516-lb-ft s'charged DOHC 32-valve V-8 Transmission 8-speed automatic Curb Weight (F/R Dist) 4,140 lb (52/48%) Wheelbase 111.6 in Lateral Acceleration 1.04 g (avg) Suspension, F; R Control arms, adj coil springs, adj shocks, anti-roll bar; multilink, adj coil springs, adj shocks, anti-roll bar Brakes, F; R 15.7-in vented, drilled carbon-ceramic disc; 15.6-in vented, drilled carbon-ceramic disc, ABS Wheels, F; R 9.5 x 20-in; 11.0 x 20-in forged aluminum Tires, F; R 265/35R20 99Y; 305/30R20 103Y Michelin Pilot Sport Cup 2 J

2019 Lamborghini Urus



3.0 SEC	11.3 SEC @ 120.1 MPH	107 FT
0-60 MPH	QUARTER MILE	BRAKING DISTANCE 60-0 MPH

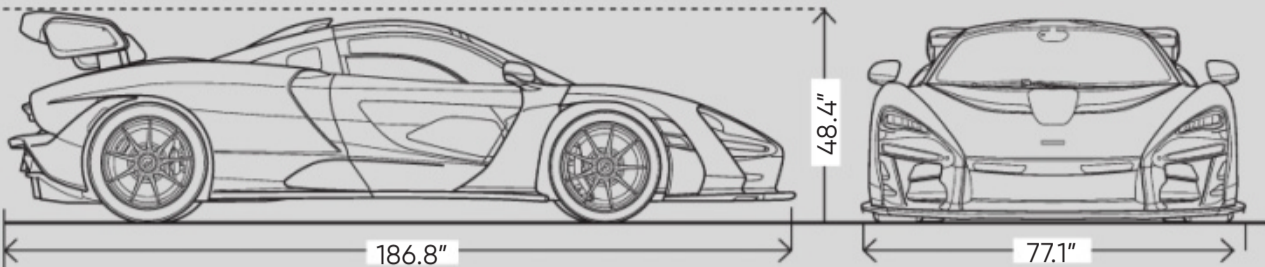
POWER: 641 HP @ 6,000 RPM
TORQUE: 627 LB-FT @ 2,250 RPM



23.5 SEC @ 0.87 G (AVG)
MT FIGURE EIGHT

Base \$203,995 As Tested \$255,803 Vehicle Layout Front-engine, AWD, 5-pass, 4-door SUV Engine 4.0L/641-hp/627-lb-ft twin-turbo DOHC 32-valve V-8 Transmission 8-speed automatic Curb Weight (F/R Dist) 4,931 lb (58/42%) Wheelbase 118.2 in Lateral Acceleration 1.01 g (avg) Suspension, F; R Multilink, air springs, adj shocks, adj anti-roll bar; multilink, air springs, adj shocks, adj anti-roll bar Brakes, F; R 17.3-in vented, drilled 2-pc carbon-ceramic disc; 14.6-in vented, drilled 2-pc carbon-ceramic disc, ABS Wheels, F; R 10.5 x 22-in; 11.5 x 22-in forged aluminum Tires, F; R 285/40R22 110Y; 325/35R22 114Y Pirelli P Zero Corsa L

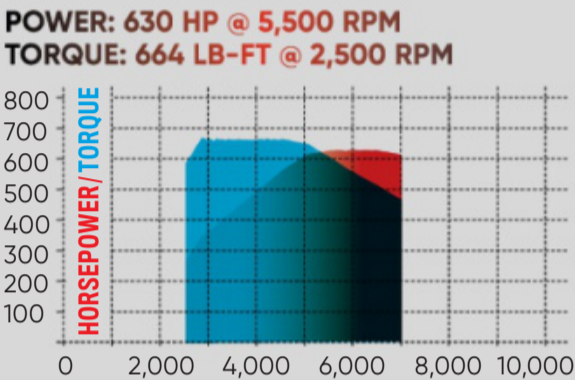
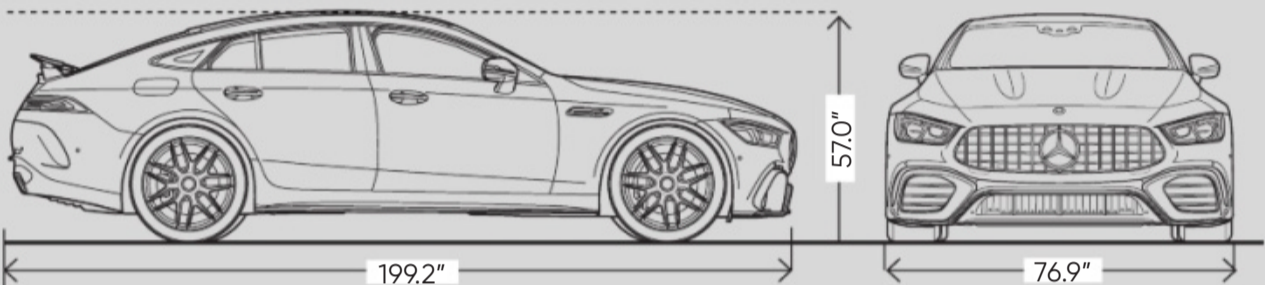
THE CONTENDERS...
2019 McLaren Senna



2.9 SEC	10.1 SEC @ 147.5 MPH	92 FT	21.9 SEC @ 1.02 G (AVG)
0-60 MPH	QUARTER MILE	BRAKING DISTANCE 60-0 MPH	MT FIGURE EIGHT

Base Price \$964,996 Price As Tested \$982,816 Vehicle Layout Mid-engine, RWD, 2-pass, 2-door coupe Engine 4.0L/789-hp/590-lb-ft twin-turbo DOHC 32-valve V-8 Transmission 7-speed twin-clutch auto Curb Weight (F/R Dist) 3,011 lb (42/58%) Wheelbase 105.0 in Lateral Acceleration 1.12 g (avg) Suspension, F; R Control arms, coil springs, adj interconnected shocks, hydraulic anti-roll and downforce resist; control arms, coil springs, adj interconnected shocks, hydraulic anti-roll and downforce resist Brakes, F; R 15.4-in vented, drilled 2-pc carbon-ceramic disc; 15.4-in vented, drilled 2-pc carbon-ceramic disc, ABS Wheels, F; R 8.0 x 19-in; 10.0 x 20-in forged aluminum Tires, F; R 245/35R19 93Y; 315/30R20 104Y Pirelli P Zero Trofeo R MC2

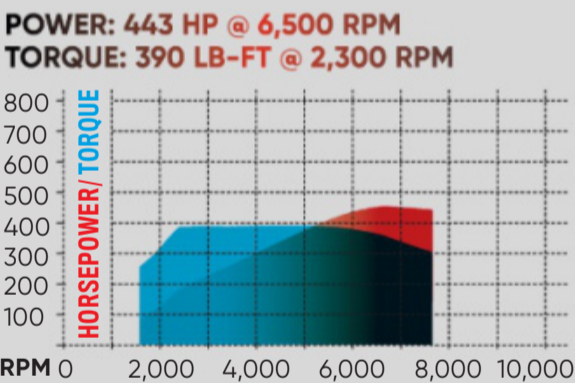
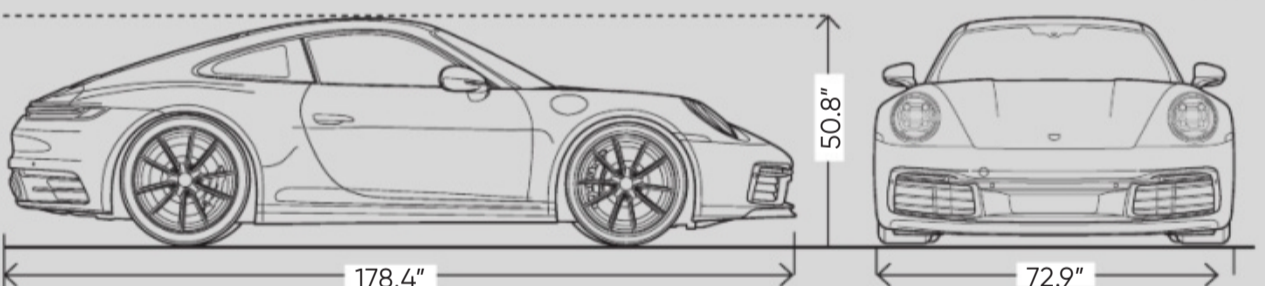
2019 Mercedes-AMG GT 63 S 4Matic+



2.9 SEC	11.2 SEC @ 122.4 MPH	100 FT	23.1 SEC @ 0.91 G (AVG)
0-60 MPH	QUARTER MILE	BRAKING DISTANCE 60-0 MPH	MT FIGURE EIGHT

Base Price \$160,995 As Tested \$196,650 Vehicle Layout Front-engine, AWD, 4-pass, 4-door hatch Engine 4.0L/630-hp/664-lb-ft t-turbo DOHC 32-valve V-8 Transmission 9-speed auto Curb Weight (F/R Dist) 4,670 lb (54/46%) Wheelbase 116.2 in Lateral Acceleration 1.05 g (avg) Suspension, F; R Multilink, air springs, adj shocks, anti-roll bar; multilink, air springs, adj shocks, anti-roll bar Brakes, F; R 15.8-in vented, drilled 2-pc carbon-ceramic disc; 14.2-in vented, drilled 2-pc carbon-ceramic disc, ABS Wheels, F; R 10.0 x 21-in; 11.5 x 21-in forged aluminum Tires, F; R 275/35R21 103Y; 315/30R21 105Y Michelin Pilot Sport Cup 2

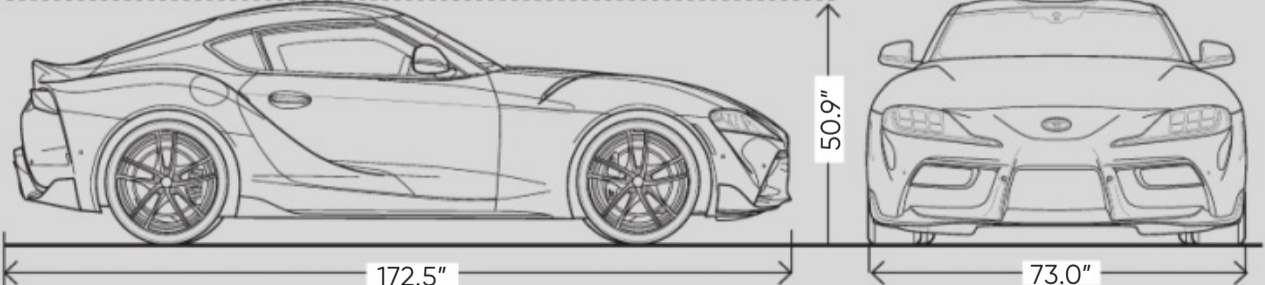
2020 Porsche 911 Carrera S



3.0 SEC	11.2 SEC @ 123.8 MPH	94 FT	23.2 SEC @ 0.89 G (AVG)
0-60 MPH	QUARTER MILE	BRAKING DISTANCE 60-0 MPH	MT FIGURE EIGHT

Base \$114,650 As Tested \$143,350 Vehicle Layout Rear-engine, RWD, 4-pass, 2-door coupe Engine 3.0L/443-hp/390-lb-ft t-turbo DOHC 24-valve flat-6 Trans 8-speed twin-clutch auto Curb Weight (F/R Dist) 3,413 lb (36/64%) Wheelbase 96.5 in Lateral Acceleration 1.07 g (avg) Suspension, F; R Struts, coil springs, adj shocks, anti-roll bar; multilink, coil springs, adj shocks, anti-roll bar Brakes, F; R 16.1-in vented, drilled 2-pc carbon-ceramic disc; 15.4-in vented, drilled 2-pc carbon-ceramic disc, ABS Wheels, F; R 8.5 x 20-in; 11.5 x 21-in forged aluminum Tires, F; R 245/35R20 91Y; 305/30R21 100Y Pirelli P Zero NA1

2020 Toyota GR Supra (Launch Edition)



3.9 SEC	12.5 SEC @ 111.2 MPH	99 FT	24.0 SEC @ 0.83 G (AVG)
0-60 MPH	QUARTER MILE	BRAKING DISTANCE 60-0 MPH	MT FIGURE EIGHT

Base Price \$56,180 Price As Tested \$57,375 Vehicle Layout Front-engine, RWD, 2-pass, 2-door hatchback Engine 3.0L/335-hp/365-lb-ft turbo DOHC 24-valve I-6 Transmission 8-speed automatic Curb Weight (F/R Dist) 3,363 lb (52/48%) Wheelbase 97.2 in Lateral Acceleration 1.01 g (avg) Suspension, F; R Struts, coil springs, adj shocks, anti-roll bar; multilink, coil springs, adj shocks, anti-roll bar Brakes, F; R 13.7-in vented disc; 13.6-in vented disc, ABS Wheels, F; R 9.0 x 19-in; 10.0 x 19-in forged aluminum Tires, F; R 255/35R19 96Y; 275/35R19 100Y Michelin Pilot Super Sport



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Edge Lettering



Missing Edge Lettering

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RANDY'S RANKINGS

HOW OUR PRO HOT SHOE RATES OUR BDC FIELD AROUND LAGUNA SECA

1 Porsche 911 Carrera S The new Carrera has quick reflexes from a front end with great grip, yet the rear still follows dutifully—a tough combination. The connection between man and machine is very close here. The reworked turbocharger flat-six adds delicious midrange torque, launching the car from corner to corner. There's just enough entry oversteer to say "911"—lively and controllable. Best-in-industry brakes and gearbox attributes remain. A winner, even on street tires.

2 McLaren Senna The utter thrill of brain-compressing speed overrules the wild-child handling to deliver a real and aggressive track car experience with genuine downforce pressing the McLaren into the road at high speeds. Unlike any other street car I've tried, the Senna is a g addict's dream come true. Not well balanced, not enough initial brake bite, but an eye-opening, adrenaline-pumping, life-enhancing experience.

3 Ford Mustang Shelby GT350 The 2019 GT350 arrives adding better balance and braking to its already terrific on-track behavior. Previous complaints of midcorner oversteer and touchy brakes have been addressed, resulting in far greater stability and consistency.

4 BMW M2 Competition There's harmony in the way the front and rear tires work together in a corner. This balance rewards

the driver every time the wheel turns. Like whipping the flanks of a race horse, I caned the M2 around the circuit as it begged for more. This driver's car urges on the driver.

5 BMW M850i xDrive Coupe The sleeper of the group. A quiet, compliant ride belies its performance potential. It has the most beautiful balance of the entire field on the racetrack and points you right at your apex. AWD that drives like RWD while always getting more power to the ground. A rumbling, refined cascade of road-wrinkling torque.

6 Mercedes-AMG GT 63 S 4Matic+ A sports car in a four-door overcoat. Prodigious power and the light, intuitive response of a much smaller piece. Its combination of minimal body roll and a mildly damped suspension creates formidable grip. Big yumps land the AMG hard on its stops. A tad too much understeer.

7 Jaguar XE SV Project 8 The Jag is racy: stiff, loud, and track-focused. At home on the track, with huge urge. Great muscular fun. It's held back a little by too much understeer under power and a mild tendency to skate the rear when entering a turn with aggression.

8 Aston Martin DBS Superleggera Brawn and beauty. A gorgeous sport luxury coupe that delivers astounding horsepower and torque, it jumps to light

speed on the straights. I'd increase the rear rebound and low-speed compression damping. Slightly less agile than some muscular cars just above, but they could easily switch places.

9 Toyota GR Supra A true sports car. Quick beyond its power numbers, it responds directly to driver requests. Shock control is too soft for track work, but it's well controlled on the street. A fair amount of midcorner oversteer requires a light touch when tipping into the throttle. A bit of isolation in the steering.

10 Bentley Continental GT V8 Handles its luxurious poundage with aplomb. Active anti-roll bars limit roll, and the deep, cushy suspension maximizes grip. Rotates well into a turn with a little tail drift, falls into rather strong understeer midcorner, and grabs pavement with all four wheels. Mountains of torque.

11 Lamborghini Urus Amazing performance ... and it's an SUV. Well-balanced behavior on track. Feels the most like a sport coupe of all the fancy truckettes. Height and weight keep it behind lower, lighter cars. Still a real success for Lamborghini.

12 Dodge Challenger SRT Hellcat Someone has to be last. The Dodge isn't refined, but it could be the most fun. Seats are like thrones. The Hemi pulls harder than you'd dream; tranny is sharp and effective in manual mode. Heavy handling is balanced and brings on the good times.





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11

You have to perfectly time Turn 11's heavy braking as it sets up the crucial exit onto the start/finish straight.

- McLaren..... 1.55 g
- Ford..... 1.21 g
- Porsche..... 1.21 g
- Mercedes-AMG..... 1.17 g
- Aston Martin..... 1.13 g
- Jaguar..... 1.13 g
- Toyota..... 1.13 g
- BMW M2..... 1.05 g
- Bentley..... 1.03 g
- Lamborghini..... 1.03 g
- BMW M850i..... 1.02 g
- Dodge..... 1.00 g

3

Time interval

- McLaren..... 1.32 g
- Porsche..... 1.20 g
- Ford..... 1.19 g
- Toyota..... 1.18 g
- Mercedes-AMG..... 1.17 g
- Aston Martin..... 1.16 g
- Jaguar..... 1.15 g
- BMW M850i..... 1.13 g
- BMW M2..... 1.11 g
- Lamborghini..... 1.11 g
- Bentley..... 1.10 g
- Dodge..... 1.07 g

2



1



LANE 1

LANE 12

- McLaren..... 1.25 g
- Ford..... 1.24 g
- Porsche..... 1.18 g
- Jaguar..... 1.10 g
- Mercedes-AMG..... 1.10 g
- Toyota..... 1.10 g
- Bentley..... 1.09 g
- BMW M2..... 1.06 g
- BMW M850i..... 1.05 g
- Lamborghini..... 1.05 g
- Aston Martin..... 1.04 g
- Dodge..... 1.03 g

- Max mph
- McLaren..... 157.7 mph
 - Mercedes-AMG..... 138.0 mph
 - Porsche..... 133.9 mph
 - Jaguar..... 133.6 mph
 - Aston Martin..... 133.4 mph
 - BMW M850i..... 131.8 mph
 - Ford..... 131.0 mph
 - Dodge..... 128.7 mph
 - Bentley..... 128.3 mph
 - Lamborghini..... 127.2 mph
 - BMW M2..... 125.9 mph
 - Toyota..... 121.7 mph

- McLaren..... 1.64 g
- Porsche..... 1.24 g
- Ford..... 1.21 g
- Mercedes-AMG..... 1.17 g
- Jaguar..... 1.13 g
- BMW M2..... 1.07 g
- BMW M850i..... 1.07 g
- Bentley..... 1.05 g
- Toyota..... 1.04 g
- Aston Martin..... 0.90 g
- Lamborghini..... 0.88 g
- Dodge..... 0.75 g

LANE 1	2	3	4	5	6	7	8	9	10	11	12
DODGE CHALLENGER SRT HELLCAT REDEYE	LAMBORGHINI URUS	TOYOTA GR SUPRA	ASTON MARTIN DBS SUPERLEGGERA	FORD MUSTANG SHELBY GT350	PORSCHE 911 CARRERA S	MCLAREN SENNA	MERCEDES-AMG GT 63 S 4MATIC+	JAGUAR XE SV PROJECT 8 (TRACK SETUP)	BMW M850I XDRIVE COUPE	BMW M2 COMPETITION	BENTLEY CONTINENTAL GT V8

Even high-performance cars and one quasi-racing car.

There are two reasons I like the graphical technique we've created for depicting the performance of our dozen Best Driver's Car candidates around WeatherTech Raceway Laguna Seca. With each car depicted in its own imaginary lane—as if placed on a humongous slot car track—it's easier to comprehend the otherwise confusing scene of 12 cars simultaneously re-enacting their single best laps. The other reason? It's an excuse to generate giant spreadsheets, chock-full of sines and cosines, that mathematically translate into a graphical representation. That and, well, it's fun to nerd out on Excel calculations.

What's happening here? The lap time of the fastest car—the McLaren Senna—has been chopped into five equal segments. When the Senna reaches each of these waypoints, we see all the rest of the pack's relative and simultaneous positions.

In addition, we've spotlighted some of the more telling data at various locations. For instance, the top speeds occur on the front straight, where the Senna reaches 157.7 mph—36.0 mph faster than the slowest along that stretch, the Toyota Supra.

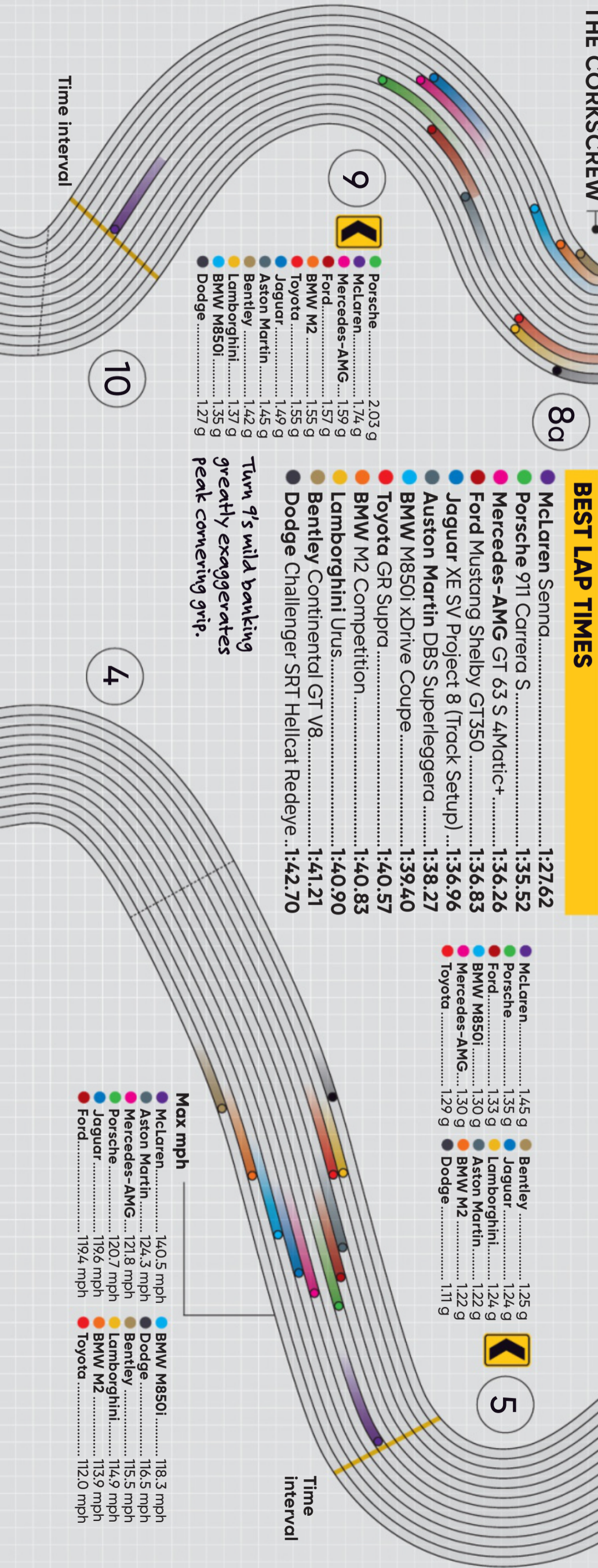
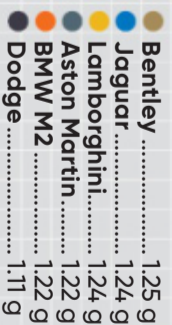
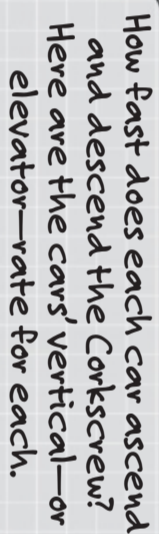
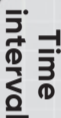
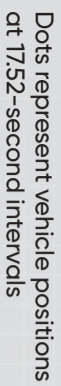
Later, we detail the cars' vertical ascent speeds while climbing up from Turn 6 to the Corkscrew; think of it as if each car were rising in its own elevator car. Predictably, the Senna rockets

upward the fastest, at 15.5 mph. What goes up must come down (the hangman's drop of the notorious Corkscrew); the most tentative descent was the Challenger's, perhaps suggesting a lack of driver confidence in the grip of a particularly heavy car as it suddenly got very light.

The lateral acceleration (cornering g's) in Turn 9 might seem strangely high (2.03 g by the Porsche 911) until you realize that the corner is noticeably banked, amplifying tire grip. However, a better representation of cornering grip happens in Turn 11, which is very flat, while their highest braking g's happen while approaching it (the Senna's peak of 1.55 g's is amazing). **Kim Reynolds**

WeatherTech Raceway Laguna Seca
Monterey, California
Track Length: 2.238 miles

WeatherTech Raceway Laguna Seca
Monterey, California
Track Length: 2.238 miles

The MotorTrend Best Driver's Car 2019 award logo is displayed in the bottom right corner. It features the words "MOTORTREND" and "BEST DRIVER'S CAR 2019" in a bold, sans-serif font, with "BEST" being the largest word. The logo is set against a white background with a red border.

WHAT'S THE DEAL WITH THE SUPRA?

A TALE OF TWO CARS AND TWO ROADS

California State Route 198. When we discovered that beautiful ribbon of road during the first Best Driver's Car competition in 2011, we knew the combination of fast sweepers and slow hairpins, on- and off-camber turns, chattery pavement and big midcorner bumps, all clustered on a traditional hill climb and staged in triple-digit heat, would be the ultimate test of a performance car's mettle.

Conversely, Route 198 is exceptional at revealing a car's flaws. Undersized brakes,

inadequate transmission calibration, and unfinished suspension tuning have all been exposed here.

In the Supra's case, it was the latter. Driven to the limit, the Supra's rear suspension couldn't cope with 198's rough asphalt, braking-zone undulations, and midcorner bump-steer moments. Under such duress, the Supra felt nervous and unsettled—always trying to regain its footing rather than preparing for the next corner. Those rear-end oscillations made the steering twitchy and nervous. Even

pro racer Randy Pobst had a "moment" on 198, which really tells you something.

The M2, by contrast, shone brightly. It easily absorbed and ignored those same grip-challenging bumps as it charged up and down the hill. Where the Supra was busy chasing its tail, the M2 was already showing its taillights. When the going got tough, the Bimmer dug in and drove like that Competition badge means something.

This is precisely the opposite of our experience during a previous comparison test, held on another one of California's mountain highways, State Route 39. Although no one would accuse SR-39 of having perfect pavement, it has none of 198's big bumps in the worst places. Rather, its small ripples of cracked pavement got the M2 Competition out of sorts but didn't faze the Supra.

Although we found the Supra to be tail-happy on Route 39, two of the three judges in that previous comparison agreed



Route 198 is exceptional at revealing flaws. Undersized brakes, inadequate transmission calibrations, and unfinished suspension tuning have all been exposed here.



THE 2020 BEST DRIVER'S CAR RANKINGS...

it was predictable, easily controlled, countered with slower, more deliberate steering inputs, and, most of all, fun. All three judges felt the opposite about the M2. In short, we judge the cars we get on the roads we drive them.

Foul play between tests? None we could find. We tested the same M2 both times. The Supras were different, but after 198, when we worried there might be something wrong with the BDC Supra, we sent it to a dealer. The dealer found no mechanical or alignment issues, which some judges were certain existed.

With a clean bill of health, we put the Supra on the nice, smooth Laguna Seca, and suddenly the old Supra, the comparison winner, was back. We can only conclude, then, that the new Supra is particularly susceptible to large bumps in the braking zone and midcorner, and it took a road like 198 to expose this nasty shortcoming.

Scott Evans

12 Toyota GR Supra

Say what? We can only review the vehicle we drive. And this early fifth-gen Supra still needs some development work. Rear-end oscillations, nervous steering, and overactive stability control. On a velvet-smooth road, the Supra has great power and predictability, but the rigors of Highway 198 sussed out this car's flaws. Still needs work.

11 Dodge Challenger SRT Hellcat Redeye

An absolute hoot when blasting exhaust notes with your friends, doing stop-light-to-stoplight drags, impressing/appalling neighbors with apocalyptic burnouts, and driving a sweeping country road at 70 percent. But ask it to lay waste to a racetrack or take a narrow twisty road at full chat, and the Challenger is found wanting.

10 BMW M850i xDrive coupe

The Bimmer delivers a great engine note, it drives small for a big car, and it has fantastic predictability around Laguna Seca. But its steering feel is distant and synthetic, the suspension sometimes struggles to keep pace with the engine's performance, and the agility afforded by the rear-steer system makes the back end twitchy.

9 Lamborghini Urus

A supercar that can haul your friends, their stuff, and a couple cases of wine. Nothing this big and heavy should corner like this; the Urus' body control almost defies the laws of physics. Perfect shift timing, every time, saves the (relatively speaking) down-on-power Lambo. Plus, loads of drama and street presence.

8 Bentley Continental GT V8

The best thing about this beefy Bentley was Porsche developing the chassis. And engine. And transmission. So silent, so controlled, so competent, so nondramatic yet fun. The shock and awe isn't how fast you're going but the calm inside the cabin. But the design is staid when parked next to the Aston.

7 Aston Martin DBS Superleggera

Ludicrously powerful, spellbinding to look at, slightly scary at full flight, and capable of giving you goose bumps even at 5 mph. The explosion of power off corners is nothing short of lyrical, majestic,

and exhilarating. Deserves a much better gearbox, traction control software that listens, more rear tire, sharper brakes at the limit, and fewer plastic bits inside.

6 Mercedes-AMG GT 63 S

A four-door that genuinely feels like a sports car, the AMG is clinical and technically competent. A snarling linebacker of a sedan. Launches like a beast with measured body control that makes it feel like you're flowing through the corners. Although it's fast and capable, it's nervously braked, flatly designed, and frankly not very engaging.

5 McLaren Senna

The fastest-ever street car around Laguna Seca left us breathless. It's a driving epiphany. Insane downforce guarantees you'll hit the brakes too early. Daily life with this function-over-form supercar would be hell: It's temperamental and has an uninspiring around-town engine note and rickety ride.

4 Jaguar XE SV Project 8

So focused, so mental, and so much torque, straight to the pavement. Superb brake feel and power. As stiff and darty as a go-kart, ready to dive for the apex the moment you breathe the steering off-center. There's zero slop to cover mistakes. However, this self-professed track car didn't really justify its tag on the circuit. Interior is dated, too.

3 BMW M2 Competition

Frolicky, pointy, planted, and confident, this is the perfect first-timer's track car. You can tailor throttle response, shift firmness, and steering feel. The Bimmer prefers fast sweepers to tight twisties, but it can live all day at the on-limit nirvana. It's down on power compared to the competition, and it's oddly slower than the Supra at Laguna Seca.

2 Ford Mustang Shelby GT350

It feels glued to the road, absolutely predictable, and that fabulous V-8 revs forever. Brakes have great bite and stopping power with zero fade. Starchy suspension returns a lot of vertical motion but never at the expense of grip. Be ready for heavy steering and skinny seats, but it's still one of the finest driver's cars on the planet. A fantastic value.

... And the winner is ...

ONCE MORE, WITH FEELING

WORDS ANGUS MACKENZIE PHOTOGRAPHS ROBIN TRAJANO

PORSCHE TAKES
THE MOTORTREND
BEST DRIVER'S CAR
TROPHY. AGAIN.



The wizards of Weissach have done it again. The 2020 Porsche 911 Carrera S is *MotorTrend's* 2019 Best Driver's Car. It's the fifth Porsche to win the award since 2007 and the fourth 911—the Cayman S drove off with the trophy back in 2009.

The 911 may seem immortal, eternal even, but it's always been a work in progress. Generations of engineers have

spent their careers buried in the bowels of Porsche's R&D headquarters, polishing, honing, refining, reimagining the car that for more than half a century has been the marque's lodestar.

This year's victory proves the point: The 992-series 911 looks familiar, feels familiar, sounds familiar. But there isn't a part or component that hasn't been touched, tweaked, or totally renewed. And made better.

"The Porsche blitzes the competition in terms of creating a cohesive, beautifully resolved driver's car," *Head 2 Head* co-host Jethro Bovingdon gushed after he spent some time behind the wheel of the 911 on the back roads of Southern and Central California, on our demanding closed-course road test on State Route 198, and on WeatherTech Raceway Laguna Seca. "It melds every control and input until the experience feels seamless



BEST DRIVER'S CAR WINNER 2020 PORSCHE 911 CARRERA S



and utterly intuitive, polished to such an extent that every other car appears rough around the edges. It's easy to drive yet rewarding to push and prod, fluid but keyed right into the road surface. It's another bloody brilliant 911."

Champion driver Randy Pobst—a man with tens of thousands of miles' experience behind the wheel of 911s at the bleeding limit—agreed: "It takes the 911 experience another step forward."

Weissach's wizardry starts with a new body wrapped entirely in aluminum panels. The 992's structure is just 30 percent steel, compared with its predecessor's 63 percent, yet rigidity has been improved by 5 percent. Aerodynamic upgrades include a flip-up rear spoiler with a 45 percent larger aerodynamically effective area, continuously variable flaps in the cooling vents at the front of the car that close between 40 mph and 90 mph to

reduce drag and fuel consumption, and door handles that cinch down flush with the bodywork.

Under the shapely rump, the twin-turbo flat-six engine, code-named 9A2 Evo, shares its crankcase, cylinder heads, oil system, and valvetrain with the turbocharged engine that made its debut in the 911's previous generation. The engine is connected to the frame rails by



What makes the Carrera S special is that you don't have to have the racer's edge to experience it at its best.

Gone are the myriad buttons, now sent to touchscreen menus. Instead, the minimalist center console features a shifter that feels pulled from a gamer's starter kit.

The larger turbochargers mean peak torque arrives 400 rpm later than before, but that's offset by the restacked ratios and faster shift times of the new eight-speed PDK transmission. First gear is shorter than in the previous car's seven-speed PDK, and seventh and eighth gears are overdrive ratios, which, combined with a longer final drive ratio, help reduce noise and fuel consumption at cruising speeds. The Carrera S hits its 191-mph top speed in sixth gear.

which lowers the ride height 0.4 inch and has spring rates 18 percent and 28 percent stiffer than the previous base Carrera S. It was also fitted with the rear-axle steering system (\$2,090) for sharper turn-in and better high-speed stability, along with the \$3,170 PDCC active roll system. Our most expensive option was the \$8,970 PCCB carbon-ceramic brake package. That might seem pricey, but we know from experience there's arguably no finer road car performance brake package for the money. These and other options brought our as-tested tab to \$143,350.

No matter whether steel or carbon-ceramic brakes are fitted, the braking is controlled using an electric booster, and the brake pedal is made from an organic sheet composite consisting of steel, carbon fiber, and plastic. It weighs 41 percent less than the previous 911's pedal. Detail stuff. But it's such attention to detail that delivers a BDC champion.

Mooching through stop-and-go L.A. traffic, the 911 feels remarkably ... at home. The engine pulls smoothly from near idle speeds, and left to its own devices, the eight-speed PDK transmission is smooth and concise. The ride is firm but not harsh, and even the race-face carbon-ceramic brakes have superbly linear feel and precision at near walking pace.

short, stiff mounts bolted to the cylinder heads, rather than by a crossbeam bolted to the crankcase, as in previous 911s. This change helps reduce throttle-induced engine motions that can subtly alter the handling balance.

The 9A2 Evo's turbochargers have grown, with 1.9-inch turbine and 2.2-inch compressor wheels, bespoke housings for the left- and right-side units that ensure equal-length intakes, and electronically controlled wastegates. The intercoolers have been moved from behind the rear wheels to under the intake vent on the engine cover to improve cooling airflow.

That's a lot of evolution for an engine unveiled less than four years ago. But, along with other minor changes, it has resulted in 443 hp at 6,500 rpm and 390 lb-ft from 2,150 to 5,000 rpm, jumps of 5 and 6 percent over the previous Carrera S.

Along with a wider track, the 992 has mixed wheel sizes, with 20-inch wheels fitted up front and 21-inchers at the rear, shod with specially developed 245/35ZR20 and 305/30ZR21 tires. A smaller 14.2-inch steering wheel is connected to an electric power steering system, which has been recalibrated to be quicker and more responsive. The spring rates have increased by 15 percent at the front and 14 percent at the rear, and new Bilstein TDX shocks allow continuously variable damping.

For \$114,650, the base Carrera S is an exquisite drive. Our tester, however, was fitted with a number of options specifically designed to sharpen the car's performance, options serious 911 drivers would consider essential. The \$5,460 Sport package added the sport exhaust system, the Sport Chrono package, and, most important, the PASM sport suspension,





Get away from the freeways, out past the urban sprawl and into the hills, and you'll discover the true genius of this 911. The standard cliché is to say it "comes alive." It doesn't. No, this 911 waits for you to stir from the numbness of daily-grind somnolence, for you to see an empty road curving ahead and tingle with anticipation. Then it simply does what you ask of it.

"There's nothing this car won't do with me, or for me," road test editor Chris Walton raved after a storming run up and down Route 198. "The controls fall away from my consciousness, and I'm simply in motion, passing through the environment, watching the scenery go by through my sheer will."

Already at the top of most judges' lists after the drive up from Los Angeles on some of California's most challenging back roads, the fast, poised, approachable Carrera S cemented its place as the car to beat in this year's shootout on the lumpy curves and jittery kinks of Route 198. "If this car doesn't win, I'll eat my shoe," features editor Scott Evans said as we prepared to head to Laguna Seca for Randy's hot lap session. Nobody passed him the ketchup.

WeatherTech Raceway Laguna Seca can always be relied upon to throw a surprise during Best Driver's Car. First time out, the 992 Carrera S was two-tenths of a second slower than the 2017 model we tested three years ago. There were puzzled frowns among the Porsche technicians and surprise from Randy, who thought the car felt very quick: "I don't know the time, but I think it's going to overachieve," he said as he pulled off his helmet. "The power-down traction was fantastic."

Turn 4 was the problem. Randy acknowledged that the quick right-hander felt slipperier than usual. Next

time out, he took a tighter line, where he found more grip and more midcorner speed. On a fresh set of tires, the Carrera S ran a 1:35.52 lap, nearly a second quicker than its predecessor, more than 0.6 second quicker than the next fastest car, the 630-hp Mercedes-AMG GT 63 S, and a time bested only by the mighty million-dollar McLaren Senna.

"The handling balance was beautiful on street tires," Randy said. "It has 911 character in that it has this little bit of entry oversteer, but it's never, never threatening. I'm amazed at how it could attack a corner. It was perfect."

As much as Randy loved it on the track, what makes the Carrera S special is that you don't have to have the racer's edge to experience it at its best. Two days earlier, on Route 198, features editor Christian Seabaugh climbed from behind the wheel and exclaimed: "This is a car that pushes you to be at your limits, and just when you reach that limit, it reveals a new layer for you to conquer—a new limit level." And with that, he'd nailed the essence of this 911.

Is the 992 perfect? Not entirely. The flat-six's engine note is, well, a bit flat. The stubby gearshift feels more suited to gaming. Certain interior bits carry a cost-down feel. And the piano-black center console reflects sunlight harshly. Just remember, this is all part of the progression of Porsche's soul.

A car that allows any driver to comfortably and confidently approach their own limits and invites them to explore the edges of its dynamic envelope is the very definition of a *MotorTrend* Best Driver's Car. Such is the 2020 Porsche 911 Carrera S. ■



2020 Porsche 911 Carrera S

DRIVETRAIN LAYOUT	Rear-engine, RWD
ENGINE TYPE	Twin-turbo flat-6, alum block/heads
VALVETRAIN	DOHC, 4 valves/cyl
DISPLACEMENT	181.9 cu in/2,981cc
COMPRESSION RATIO	10.2:1
POWER (SAE NET)	443 hp @ 6,500 rpm
TORQUE (SAE NET)	390 lb-ft @ 2,300 rpm
REDLINE	7,400 rpm
WEIGHT TO POWER	7.7 lb/hp
TRANSMISSION	8-speed twin-clutch auto
AXLE/FINAL DRIVE RATIO	3.39:1/2.07:1
SUSPENSION, FRONT; REAR	Struts, coil springs, adj shocks, anti-roll bar; multilink, coil springs, adj shocks, anti-roll bar
STEERING RATIO	12.3-14.1:1
TURNS LOCK TO LOCK	2.4
BRAKES, F; R	16.1-in vented, drilled, 2-pc carbon-ceramic disc; 15.4-in vented, drilled, 2-pc carbon-ceramic disc, ABS
WHEELS, F; R	8.5 x 20-in; 11.5 x 21-in forged aluminum
TIRES, F; R	245/35R20 91Y; 305/30R21 100Y Pirelli P Zero NA1
DIMENSIONS	
WHEELBASE	96.5 in
TRACK, F/R	62.5/61.2 in
LENGTH X WIDTH X HEIGHT	178.4 x 72.9 x 50.8 in
TURNING CIRCLE	35.8 ft
CURB WEIGHT	3,413 lb
WEIGHT DIST, F/R	36/64%
SEATING CAPACITY	4
HEADROOM, F/R	37.9/32.5 in
LEGROOM, F/R	42.2/27.2 in
SHOULDER ROOM, F/R	52.6/47.9 in
CARGO VOLUME	4.7 (trunk)/9.3 (rear) cu ft
TEST DATA	
ACCELERATION TO MPH	
0-30	1.1 sec
0-40	1.6
0-50	2.2
0-60	3.0
0-70	3.8
0-80	4.8
0-90	5.9
0-100	7.3
0-100-0	10.9
PASSING, 45-65 MPH	1.4
QUARTER MILE	11.2 sec @ 123.8 mph
BRAKING, 60-0 MPH	94 ft
LATERAL ACCELERATION	1.07 g (avg)
MT FIGURE EIGHT	23.2 sec @ 0.89 g (avg)
2.2-MI ROAD COURSE LAP	95.52 sec
TOP-GEAR REVS @ 60 MPH	1,250 rpm
CONSUMER INFO	
BASE PRICE	\$114,650
PRICE AS TESTED	\$143,350
STABILITY/TRACTION CONTROL	Yes/Yes
AIRBAGS	8: Dual front, front side, f/r curtain, front knee
BASIC WARRANTY	4 years/50,000 miles
POWERTRAIN WARRANTY	4 years/50,000 miles
ROADSIDE ASSISTANCE	4 years/50,000 miles
FUEL CAPACITY	16.9 gal
EPA CITY/HWY/COMB ECON	18/24/20 mpg
ENERGY CONS, CITY/HWY	187/140 kW-hr/100 miles
CO2 EMISSIONS, COMB	0.96 lb/mile
RECOMMENDED FUEL	Unleaded premium

WEATHERTECH RACEWAY LAGUNA SECA LAP TIMES

FASTEST CARS WE'VE HOT-LAPPED. JEALOUS?



2019 BDC Contestant
*Best Driver's Car winner
**Best Handling Car winner

TIME	M.Y. VEHICLE (OPTION)	SAE HORSEPOWER/TORQUE	TIRES
1:27.62	2019 McLaren Senna	789/590	Pirelli P Zero Trofeo R MC2
1:28.30	2018 Porsche 911 GT2 RS (Weissach)	691/553	Michelin Pilot Sport Cup 2 R NO
1:29.78	2018 McLaren 720S	710/568	Pirelli P Zero Corsa MC
1:29.89	2015 Porsche 918 Spyder	887/944	Michelin Pilot Sport Cup 2 NO
1:30.00	2018 Lamborghini Huracán Performante	630/443*	Pirelli P Zero Trofeo R L
1:30.46	2016 Dodge Viper ACR	645/600	Kumho Ecsta V720 ACR
1:30.71	2015 McLaren P1	904/664	Pirelli P Zero Trofeo R
1:30.97	2015 Porsche 918 Spyder (Weissach)	887/944	Michelin Pilot Sport Cup 2 NO
1:31.58	2016 Dodge Viper ACR	645/600	Kumho Ecsta V720 ACR
1:31.68	2016 Ferrari 488 GTB	661/561*	Michelin Pilot Sport Cup 2
1:32.46	2019 Chevrolet Corvette ZR1 (ZTK)	755/715	Michelin Pilot Sport Cup 2 ZP
1:33.01	2018 Mercedes-AMG GT R	577/516	Michelin Pilot Sport Cup 2
1:33.05	2016 Chevrolet Corvette Z06 (Z07)	650/650	Michelin Pilot Sport Cup 2
1:33.21	2017 Porsche 911 Turbo S	580/516	Pirelli P Zero Corsa NO
1:33.29	2016 Porsche 911 GT3 RS	493/338	Michelin Pilot Sport Cup 2 N1
1:33.37	2019 McLaren 600LT	592/457	Pirelli P Zero Trofeo R MC
1:33.62	2014 SRT Viper TA	640/600	Pirelli P Zero Corsa
1:34.23	2017 Audi R8 V10 (Plus)	602/413	Michelin Pilot Sport Cup 2
1:34.30	2018 Chevrolet Camaro ZL1 (1LE) (6M)	650/650	Goodyear Eagle F1 Supercar 3R
1:34.50	2012 McLaren MP4-12C	592/443	Pirelli P Zero Corsa
1:34.58	2016 McLaren 570S	562/443*	Pirelli P Zero Corsa
1:34.63	2013 SRT Viper	640/600	Pirelli P Zero Corsa
1:34.87	2017 McLaren 570GT	562/443	Pirelli P Zero MC PNCS
1:35.01	2017 Nissan GT-R NISMO	600/481	Dunlop SP Sport Maxx GT600 DSST
1:35.03	2014 Mercedes-Benz SLS AMG (Black)	622/468	Michelin Pilot Sport Cup 2
1:35.30	2016 Mercedes-AMG GT S	503/479	Michelin Pilot Sport Cup 2
1:35.51	2015 Nissan GT-R NISMO	600/481	Dunlop SP Sport Maxx GT600 DSST
1:35.52	2020 Porsche 911 Carrera S	433/390*	Pirelli P Zero NA1
1:35.57	2016 Mercedes-AMG GT S	503/479*	Michelin Pilot Sport Cup 2
1:35.62	2014 Porsche 911 Turbo S	560/516	Dunlop Sport Maxx Race NO
1:36.02	2018 Chevrolet Corvette Grand Sport	(7M) 460/465	Michelin Pilot Sport Cup 2
1:36.11	2016 Ford Mustang Shelby GT350R	526/429	Michelin Pilot Sport Cup 2
1:36.22	2010 Ferrari 458 Italia	557/398*	Michelin Pilot Sport K1
1:36.26	2019 Mercedes-AMG GT 63 S 4Matic+	630/664	Michelin Pilot Sport Cup 2
1:36.36	2017 Acura NSX	573/476	Pirelli P Zero Trofeo
1:36.40	2017 Porsche 911 Carrera S	420/368	Pirelli P Zero N1
1:36.63	2014 Nissan GT-R Track Pack	545/463	Dunlop SP Sport Maxx GT600 DSST CTT
1:36.83	2019 Ford Mustang Shelby GT350	526/429	Michelin Pilot Sport Cup 2
1:36.96	2019 Jaguar XE SV Project 8 (Track Setup)	592/516	Michelin Pilot Sport Cup 2 J
1:37.08	2017 Nissan GT-R (Premium)	565/467	Dunlop SP Sport Maxx GT600 DSST CTT
1:37.43	2016 Porsche Cayman GT4	385/309	Michelin Pilot Sport Cup 2
1:37.54	2019 Jaguar XE SV Project 8	592/516	Michelin Pilot Sport Cup 2 J
1:37.66	2016 BMW M4 GTS	493/443	Michelin Pilot Sport Cup 2
1:37.77	2017 Chevrolet Camaro SS (1LE)	455/455	Goodyear Eagle F1 Supercar 3
1:37.82	2014 Chevrolet Camaro Z/28	505/481*	Pirelli P Zero Trofeo R
1:38.27	2019 Aston Martin DBS Superleggera	715/664	Pirelli P Zero A7A
1:38.28	2014 Chevrolet Corvette Stingray Z51	460/465	Michelin Pilot Super Sport ZP
1:38.42	2019 Aston Martin Vantage	503/505	Pirelli P Zero A6A
1:38.42	2018 Ford Mustang GT (PP2)	460/420	Michelin Pilot Sport Cup 2
1:38.52	2016 Cadillac CTS-V Sedan	640/630	Michelin Pilot Super Sport
1:38.70	2014 Audi R8 V10 Plus	550/398	Pirelli P Zero
1:38.75	2017 Jaguar F-Type SVR	575/516	Pirelli P Zero
1:39.19	2013 Porsche 911 Carrera 4S	400/325*	Pirelli P Zero
1:39.30	2012 Porsche 911 Carrera S	400/325*	Pirelli P Zero
1:39.40	2019 BMW M850i xDrive Coupe	523/553	Bridgestone Potenza S007
1:39.57	2007 Porsche 911 GT3	415/300**	Michelin Pilot Sport Cup
1:39.65	2017 Alfa Romeo Giulia Quadrifoglio	505/443	Pirelli P Zero AR
1:39.69	2015 BMW M4	425/406	Michelin Pilot Super Sport
1:39.81	2018 BMW M5	600/553	Michelin Pilot Sport 4S
1:39.95	2018 Audi TT RS	400/354	Pirelli P Zero R01
1:40.05	2017 Aston Martin DB11	600/516	Bridgestone Potenza S007
1:40.05	2017 Porsche 718 Cayman S (PDK)	350/309	Pirelli P Zero N1
1:40.18	2016 Cadillac ATS-V Coupe	464/445	Michelin Pilot Super Sport
1:40.50	2015 Mercedes-AMG C63 S Sedan	503/516	Michelin Pilot Super Sport
1:40.57	2020 Toyota GR Supra (Launch Edition)	335/365	Pirelli P Zero
1:40.71	2014 Aston Martin Vanquish	565/457	Pirelli P Zero
1:40.81	2014 Jaguar F-Type V8 S	488/461	Pirelli P Zero
1:40.83	2019 BMW M2 Competition	488/406	Michelin Pilot Super Sport
1:40.90	2019 Lamborghini Urus	641/627	Pirelli P Zero L
1:40.92	2009 Audi R8	420/317**	Pirelli P Zero
1:41.21	2020 Bentley Continental GT V8	550/568	Pirelli P Zero
1:41.26	2014 Porsche Cayman S	325/272	Pirelli P Zero
1:41.77	2017 Aston Martin V12 Vantage S	565/457	Pirelli P Zero Corsa
1:42.01	2015 Jaguar F-Type R Coupe	550/502	Pirelli P Zero
1:42.39	2014 Mercedes E63 S AMG (wagon)	577/590	Continental ContiSportContact 5P
1:42.70	2019 Dodge Challenger SRT Hellcat Redeye	797/707	Pirelli P Zero
1:42.95	2009 Porsche Cayman S (PDK)	320/273*	Michelin Pilot Sport
1:43.20	2015 Lexus RC F	467/398	Michelin Pilot Super Sport
1:43.40	2018 Lexus LC 500	471/398	Michelin Pilot Super Sport
1:43.49	2014 Mercedes C63 AMG (507 Ed)	507/450	Continental ContiSportContact 5P
1:43.50	2018 Alfa Romeo Stelvio Quadrifoglio	505/443	Pirelli P Zero AR
1:43.51	2015 Bentley Continental GT3-R	572/518	Pirelli P Zero
1:43.78	2015 Alfa Romeo 4C	237/202	Pirelli P Zero AR Racing
1:44.02	2016 Mazda MX-5 (Cup Racecar)	155/148	BF Goodrich R1S
1:44.22	2018 Honda Civic Type R	306/295	Continental SportContact 6
1:44.29	2015 BMW i8	357/420	Bridgestone Potenza S001
1:46.16	2018 Kia Stinger GT	365/367	Michelin Pilot Sport 4S
1:46.60	2013 Bentley Continental GT Speed (Le Mans Edition)	616/590	Pirelli P Zero
1:46.95	2015 Volkswagen Golf R	292/280	Bridgestone Potenza RE050A
1:47.16	2015 Subaru WRX STI	305/290	Dunlop Sport Maxx RT
1:48.18	2019 Jaguar I-Pace EV400 AWD HSE	394/512	Pirelli P Zero
1:48.47	2019 Mazda MX-5 (Club)	181/151	Bridgestone Potenza S001
1:50.11	2015 Volkswagen GTI	217/258	Bridgestone Potenza S001
1:50.79	2013 Tesla Model S P85+	416/443	Michelin Pilot Sport PS2
1:51.25	2014 Ford Fiesta ST	197/202	Bridgestone Potenza RE050A
1:51.43	2017 Mazda MX-5 RF (Club)	155/148	Bridgestone Potenza S001



Welcome to the first *MotorTrend* Best Driver's Car Grand Prix: six of the best road cars racing wheel to wheel on WeatherTech Raceway Laguna Seca.

Why? Well, we got to thinking that although the data taken from our hot laps with Randy Pobst is fascinating, multiple laps with other cars in close proximity might yield very different results.

Sometimes Randy emerges from a contender sweating. It's taken every ounce of his skill to extract the optimum time. Think of the McLaren 720S last year. Could that pace be replicated with the added pressure of other cars sharing track space and also right on the limit? Maybe the strain would start to show on the cars, too. Sure, those impressive-looking brakes might endure an out lap, hot lap, in lap cycle, but what about a longer session and without running in clean, cool air?

The *MotorTrend* Best Driver's Car Grand Prix would be all about consistency, confidence, and endurance. It sounded like a hell of a lot of fun, too. Amazingly, the car companies we asked all approved of this damn-fool stunt and consented to our running more than \$1 million in sheet-metal around the track simultaneously.



BEST RACER'S CAR

WE STAGE A MINI GRAND PRIX AMONG SIX OF THE *MOTORTREND* BEST DRIVER'S CARS

WORDS JETHRO BOVINGDON



Gentlemen, start your engines,
and please don't crash. Jonny
Lieberman waves home the field.

MotorTrend Best Driver's Car Grand Prix | ONLINE



there's me, the token Brit, in a flame-spitting McLaren 600LT. (Sorry, no Senna. McLaren wisely had second thoughts but sent along a proper substitute as an apology.) I'm way off the back of the grid to make things as "fair" as possible. Yeah, someone doesn't want me to win.

We have front-, mid-, and rear-engine contenders, driven by drifters, racers, and motor journalists; more than 3,200 hp generated by six-, eight-, and 12-cylinder engines; and the simply awesome Laguna Seca as our playground.

This is the *MotorTrend* Best Driver's Car Grand Prix. ■

SO WHO WON? To see the inaugural BDC Grand Prix in action, head to [MotorTrendOnDemand.com](https://www.motortrend.com/ondemand).

The rules are simple. Three laps, with the grid run in reverse order, fastest car at the back, slowest car in pole position.

Our front row is the much-hyped Toyota GR Supra driven by three-time Formula Drift Champion and *Drift This* co-host Chris Forsberg, beside the 715-hp Aston Martin DBS Superleggera driven by endurance racer and 12 Hours of Sebring winner Marino Franchitti.

Next back are the Jaguar Project 8 and Shelby Mustang GT350 nestled alongside each other piloted by Axel Stein and Patryk Mikiciuk of the German and Polish affiliates of *MotorTrend*, respectively. This is an international Grand Prix, after all.

In row three, hailing all the way from Georgia, is our very own Randy Pobst in the Porsche 992 Carrera S. Finally,



Axel Stein tries to persuade *MT* data cruncher Kim Reynolds to place him a few more car lengths closer to the starting line.



Jethro Bovingdon discovers his McLaren race car is not the one he expected.

"Because we can" is the reason we gave for doing World's Greatest Drag Race the first time, eight years ago. Now it's more like, "Because we'd be crazy not to."

We love it, you love it, and apparently so do the fine airmen of the 30th Space Wing, headquartered at Vandenberg Air Force Base; this is the third year in a row they've agreed to host our madness. This explains how we ended up with our 12 Best Driver's Cars lined up and revving on the clean, grooved concrete of America's fourth-longest runway.

But here's the thing: You already know who wins—you blew right past it. Thumb back to all the test numbers in the spec panels on page 44. There, in each competitor's acceleration line, is the elapsed time and trap speed in the quarter mile. Match those times to each of the vehicles you see in the photo below, and, well, there you go. It's a



WORDS ED LOH PHOTOGRAPHS MOTORTREND STAFF

tedious and deeply unsatisfying exercise, yes? Hang on.

Last year we doubled down on WGDR by taking five of the drag race competitors twice the distance to a half-mile stretch and adding *Roadkill* star Mike Finnegan's Hemi V-8-powered '55 Chevy (nicknamed "Blasphemi") to the mix. Window-blowing, hood-scoop-shattering shenanigans ensued.

How do we improve upon that combination? By taking the entire 12-car field to the half-mile and adding a German comedian, a Polish car collector, and the world's luckiest Australian dentist to the mix. Yes, we put the aforementioned colleagues from the German and Polish affiliates of *MotorTrend*, Axel Stein and Patryk Mikiciuk, behind the wheels of the AMG GT 63 S and Bentley Continental

GT V8. For fun and for free dental work for the rest of my life, I let my cousin Quang take my spot in the drag race in the fun but relatively slow BMW M2 Competition (editor-in-chief privilege in full effect).

The real question is what happens when you take 12 cars and double the 1,320? We don't regularly test acceleration to the half mile, so we didn't know who would win when we first pulled onto the tarmac at Vandenberg. Sure, we had our guesses, but only in the race could we confirm for sure.

Which car gets faster after the quarter? Which one runs out of breath? Once the 797-hp Hellcat Redeye hooks up, surely it shows its taillights to the field, right? Or is it the DBS Superleggera and its twin-turbo V-12 that most effectively uses its



WORLD'S GREATEST





OUR 12 COMPETITORS RACE TO A QUARTER MILE—AND BEYOND

700-plus horsepower? Will the track specialist Senna be held back by all of its downforce-inducing fins and wings? Will any of the cars capable of 200 mph even come close at the checkered flag? So many questions.

This medium of print is good for many things, but it's truly terrible at bringing to life the raw and righteous riot of 48 tires and nearly 7,000 horsepower

igniting on the word *go*. I know, I know, you're tired of hearing it, but please put this magazine down and pull out your smartphone. Open your browser and head to MotorTrend.com/bdc to watch World's Greatest Drag Race 9.

I guarantee you won't be disappointed. But if you are, hit me up on Twitter @edlooh, and I'll send you some swag—if I believe you. ■



D R A G R A C E 9

Polish host Patryk Mikiciuk (above) and German comedian Axel Stein (middle) join the men and women of the 30th Space Wing in the race to 1,320 and 2,640.



Eleven *MotorTrend* staffers and one fortunate dentist line up for ultimate bragging rights.



MAN'S BEST FRIEND DESERVES MAN'S BEST BOWL

Pet Feeding System

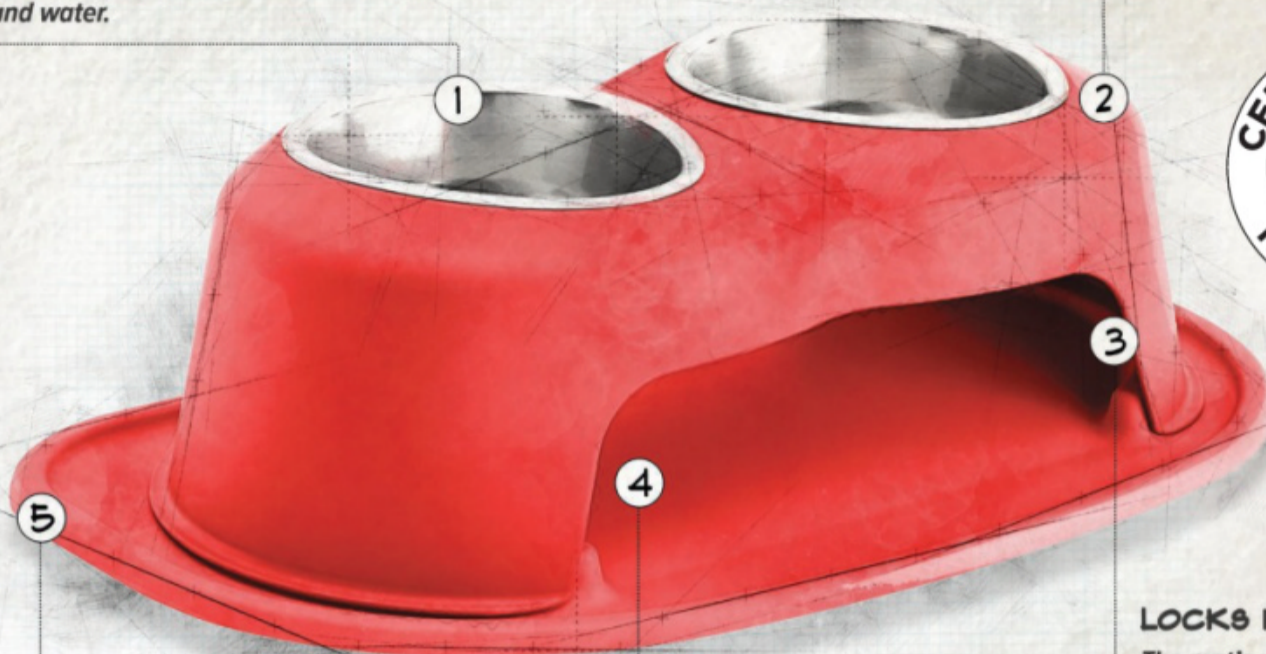
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Elongated bowl design provides strain-free access to food and water.

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The sloped surface of the stand allows food and water to roll down to the mat below and not onto your floors!



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Keeps food and water contained within the easy-to-clean mat and off your floors.

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Prevents spilled food and water from pooling underneath the stand and bowls, redirecting them to the outer edges of the mat.

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EXCLUSIVE

WORDS SCOTT EVANS PHOTOGRAPHS ROBIN TRAJANO

THE C8 CORVETTE KEEPS ITS PROMISES

This far, no farther. Chevrolet's Corvette engineering team has been clear: They had taken the front-engine, rear-drive sports car platform as far as possible. The only way forward was to move the engine backward. After pulling the pin and blowing up 65 years of history and heritage, the mid-engine C8 Corvette made its debut to incredible promises.

And after decades reporting rumors and false starts, we can finally confirm: Chevrolet keeps its promises.

You'll forgive any skepticism. Chevrolet told us moving the engine back a few feet, adding 35 horsepower (give or

take), and employing a dual-clutch transmission would make the 495-hp C8 Corvette Z51 quicker to 60 mph than the 755-hp C7 Corvette ZR1, despite the C8's considerably worse power-to-weight ratio. Plus, they said, it would come within a tenth of a g or two on the skidpad while wearing all-season tires. Oh, and it'll do all that for half the price, give or take.

That's quite a target to aim for. With launch control engaged and 61 percent of the weight on the rear tires, the C8 Corvette Z51 shot to 60 mph in a staggering 2.8 seconds on the way to an 11.1-second quarter mile at 123.2 mph.

Let's geek out on these numbers for a hot minute. The best the C7 could

ever manage is 3.0 seconds to 60. That 2019 C7 ZR1 weighed only a few dozen pounds more than this 3,622-pound C8 Z51 but had to launch just 4.8 pounds per horsepower to the new car's 7.3. The best a C7 Z51 could ever do was 3.7 seconds to 60, with the same power-to-weight as the new car thanks to a slimmer curb weight. Even the C7 Grand Sport, with its stickier tires and Z06 suspension, only managed a 3.6. The quickest factory Corvette ever is the new base model with a sport package.

As you'd expect, much of the advantage is in the launch, but you'd be surprised just how much. The quickest C7 ZR1 ran a 10.8-second quarter mile at 133.1 mph, just 0.3 second quicker. So great was the



PARTY IN THE BACK

C8 Z51's launch advantage that the C7 ZR1 barely got ahead of it by the quarter by running 10 mph faster.

And what of the other big number? Breaking 1.00 average lateral g on the skidpad is an accomplishment, but it's easier when you have summer tires rather than all-seasons, and the Michelin Pilot Sport 4S included in the Z51 package is very much a summer tire. With it, the C8 Z51 pulled 1.04 average lateral g on the skidpad—which is actually less than a C7 Z51, which pulled as much as 1.11 average

We called the 7.0-liter LS7 in the C6 Z06 a "hall of fame engine" for making 505 hp and revving to 7,000 rpm, and here's a 6.2-liter that makes 495 hp and revs to 6,400 plus a dual-clutch transmission and mid-engine balance. Progress is beautiful.





Give it a lot of throttle sans ESC, and you'll likely end up backward. Be extremely patient and roll into the throttle correctly, and the C8 will dig in and push hard off the exit of a corner. Give it too much gas, though, and the rear end is happy to step out. The line between a nice power-on drift and a spin is razor thin.

Which explains the understeer. Moving the engine (and thus the weight balance) to the center decreases the polar moment of inertia, making a vehicle more prone to spinning. Understeer makes it harder for the vehicle to get sideways and reduces the chance of a spin. The Corvette team is more than capable of tuning the car for a more balanced demeanor, which makes us think this was intentional.

The vast majority of C8s sold will be base Stingrays. More than likely, those who buy them will have never driven a mid-engine car or one that hits 60 in less time than it takes to start the engine. Severe understeer will help prevent the overeager owners from pulling a Mustang exit at their local cars and coffee. Given all that, we also expect future performance models, from Grand Sport to Z06 to ZR1 and anything else, to dial back the understeer in pursuit of performance.

There's more to the story, though. Although the C8 struggles for grip

midcorner, it dwarfs the C7's ability to put down power coming off the corner; the ultra-quick transmission and extra power conspire to reduce the time between corners. Witness the C8 Z51's 23.3-second figure-eight lap at 0.90 average g, 0.4 second ahead of any C7 Z51 and 0.2 behind a C7 Z06 with steel brakes.

Brakes are the one area where the C8 does not have a decided advantage over the C7. At 97 feet, the C8 Z51's best stopping distance from 60 mph falls on the longer end of the C7 Stingray and Z51's scale, costing it precious time in short figure-eight laps. The brakes were also a source of contention among the staff. In everyday and even sporty driving, they get the job done fine. It's when pushed to the limit that they fall short.

The car stops fine, but the brake-by-wire pedal feel isn't reassuring. ABS activation happens before the pedal reaches the end of its travel, and once you're there, it's difficult to modulate. You have to learn to listen and feel for other signs that you're approaching the limit because cars stop considerably better under threshold braking than with ABS

lateral g on the Pilot Super Sports that preceded the Pilot 4S.

How did that happen? With grinding, infuriating understeer, as testing director Kim Reynolds was bemused to discover. This is the C8's default move at its limits, even as a mid-engine car with the Z51 package. Why do this? Because of what happens if you turn off the excellent stability control and Performance Traction Management computer.

Put simply, the C8 is no drift car. Try to correct the understeer with a nudge of throttle, and you get more understeer.





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2020 Chevrolet Corvette (3LT/Z51)

DRIVETRAIN LAYOUT	Mid-engine, RWD
ENGINE TYPE	90-deg V-8, alum block/heads
VALVETRAIN	OHV, 2 valves/cyl
DISPLACEMENT	376.0 cu in/6,162cc
COMPRESSION RATIO	11.5:1
POWER (SAE NET)	495 hp @ 6,450 rpm
TORQUE (SAE NET)	470 lb-ft @ 5,150 rpm
REDLINE	6,400 rpm
WEIGHT TO POWER	7.3 lb/hp
TRANSMISSION	8-speed twin-clutch auto
AXLE/FINAL DRIVE RATIO	3.55:1/1.70:1
SUSPENSION, FRONT; REAR	Control arms, coil springs, adj shocks, anti-roll bar; control arms, coil springs, adj shocks, anti-roll bar
STEERING RATIO	15.7:1
URNS LOCK TO LOCK	2.5
BRAKES, F; R	13.3-in vented disc; 13.8-in vented disc, ABS
WHEELS, F; R	8.5 x 19-in; 11.0 x 20-in cast aluminum
TIRES, F; R	245/35R19 89Y; 305/30R20 99Y Michelin Pilot Sport 4S
DIMENSIONS	
WHEELBASE	107.2 in
TRACK, F/R	64.9/62.4 in
LENGTH X WIDTH X HEIGHT	182.3 x 76.1 x 48.6 in
TURNING CIRCLE	36.4 ft
CURB WEIGHT	3,622 lb
WEIGHT DIST, F/R	39/61%
SEATING CAPACITY	2
HEADROOM	37.9 in
LEGROOM	42.8 in
SHOULDER ROOM	54.4 in
CARGO VOLUME, F; R	4.0; 8.6 cu ft
TEST DATA	
ACCELERATION TO MPH	
0-30	1.0 sec
0-40	1.5
0-50	2.1
0-60	2.8
0-70	3.7
0-80	4.6
0-90	5.8
0-100	7.1
0-100-0	10.8
PASSING, 45-65 MPH	1.4
QUARTER MILE	11.1 sec @ 123.2 mph
BRAKING, 60-0 MPH	97 ft
LATERAL ACCELERATION	1.04 g (avg)
MT FIGURE EIGHT	23.3 sec @ 0.90 g (avg)
TOP-GEAR REVS @ 60 MPH	1,300 rpm
CONSUMER INFO	
BASE PRICE	\$76,945
PRICE AS TESTED	\$88,305
STABILITY/TRACTION CONTROL	Yes/Yes
AIRBAGS	4: Front, fr side/head
BASIC WARRANTY	3 years/36,000 miles
POWERTRAIN WARRANTY	5 years/60,000 miles
ROADSIDE ASSISTANCE	5 years/60,000 miles
FUEL CAPACITY	18.5 gal
EPA CITY/HWY/COMB ECON	16/27/20 mpg (est)
ENERGY CONS, CITY/HWY	211/125 kW-hr/100 mi (est)
CO2 EMISSIONS, COMB	0.99 lb/mile (est)
RECOMMENDED FUEL	Unleaded premium



As it has for years, the roof comes off and stows in the trunk, but now you have a frunk for some of the cargo the roof displaces.

software cycling through them. This applies doubly if the braking zone isn’t perfectly smooth, as even a slight loss of grip at either front wheel sends the C8’s ABS into conniptions. Chevrolet says the pedal travel and resistance characteristics change depending on the driving mode, but we couldn’t feel the difference. No mode seemed any better than the others in limit braking. Although isolating brakes may be a shortcoming, the C8’s isolating ride on long cruises is a highlight. The magnetic dampers, set to Tour mode, ride like a luxury sport sedan. Impacts from expansion joints, crumbling pavement, and railroad crossings are heard far more than they’re felt. Even big impacts struggle to rattle the cabin. Twisting the drive mode knob up through Sport and Track settings stiffens the ride and increases the amount of vertical motion for occupants, but even at its most inflexible the ride is never punishing. It’s just one element of an unusually coddling interior for a Corvette. No longer can we chide Chevrolet for cheap materials, mediocre build quality, and unsupportive seats. Our 3LT trim tester was loaded up to nearly \$90,000, and you could see and feel where every penny went (except maybe the cupholders). The GT2 seats offered excellent support under hard driving and equal comfort the rest of the time. The leather is the best quality

we’ve seen in a Corvette, and the cabin is quiet enough to whisper across at 80 mph. The steering wheel places your hands in awkward positions during cornering, but we appreciate the clear view of the instrument cluster it affords. The other side of the coin is a disconnectedness from the raw performance of the car. The engine is rather quiet for a Corvette (though it retains that distinctive small-block roar), and the transmission is so smooth in Tour mode that you don’t get a sense of just how fast you’re going, at least until you brake. Similarly, it neither looks nor feels like a sub-3-second 0–60 sprint, but the numbers don’t lie. There’s never a big shove of torque; the engine’s delivery is always exactly the same. You just gain speed, as simple as that. The dual-clutch transmission is exceptional for a first try, a game effort to match Porsche’s benchmark PDK. The steering is precise and accurate but could stand to give you more road feel. For decades, we made excuses for the Corvette’s foibles, arguing its performance per dollar trumped all else. The C7 changed that, showing us Chevy could afford to make the Corvette nice, too, in addition to fast. Still, it wasn’t as nice as the cars it was beating on the stopwatch. No more. The C8 is not only powerful, but, dare we say, it’s also the most premium-feeling Corvette that Chevrolet has ever made. It’s the quickest Corvette to ever roll off the assembly line and up to a stoplight, and it somehow still starts at \$60,000. And this is just the beginning. ■





ICYMI

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WORDS DEREK POWELL

McLaren is on a roll these days. Of the 18,000 vehicles it has produced since 2011, a huge portion of that total—4,863, to be exact—were sold in 2018, and the 2019 models are nearly sold out. Not bad for a company that sells only sports cars. But to stay viable and to attract even more new buyers, the portfolio must expand beyond this niche.

So what to do when you're a small-volume manufacturer looking to make the most out of what you already have?

Up until now, McLaren has been "sports cars for serious drivers," chief engineer

Adam Thomson says. But as part of its Track25 business plan, the company is looking at expanding. In addition to the Sport, Super, and Ultimate Series ranges, McLaren adds a fourth category: Grand Touring. The McLaren GT is the inaugural model for this new category.

"There's this huge, diverse range of what a GT product is," Thomson says. "Some of them are great at some things. Some of them are less great at some things. But they all carry some inherent DNA that, for us, means they're compromised in certain ways."

Weight, according to McLaren, is the biggest compromise, followed closely by agility. When designing the GT, McLaren instead chose to take inspiration from classic GTs from the '60s, which best embodied this clarity of purpose that it sought to achieve. The challenge? Creating a new model that feels special and distinct from an existing platform.

Of course, the difference here is that McLaren is starting with an exceptional platform. A new carbon-fiber structure, dubbed Monocell II-T, is adapted from the 570S tub. A new rear upper structure



GETTING THERE

McLAREN OFFERS AN IDEAL GT
FOR A NON-IDEAL WORLD

enables the engine to nestle closer to the ground for a lower center of gravity, all while retaining the full structural rigidity of the original.

Despite the use of shared components, McLaren says two-thirds of the GT is specific to this model. From there, it was all about creating a unique identity. If there were a mission statement, it would read something akin to the following:

It has to have presence. “GT customers want a car that is more understated, more elegant, more subtle,” Thomson says. One look at the exterior,

and the silhouette is still instantly identifiable as a McLaren: long, low, and wide, with a distinctive greenhouse that begins just above the front axle and flows harmoniously into the rear quarters. Perhaps the front end is a little too understated, with the headlights lacking the visual drama of McLaren’s other cars. This is a coupe that gets better-looking the farther back you go.

It has to be quick. That’s an easy one. The GT is motivated by a revised version of the existing 4.0-liter twin-turbo V-8 found in the 720S, here tuned to deliver

612 hp and 465 lb-ft—with 95 percent of that torque available from 3,000 to 7,200 rpm. That’s sufficient to propel the 3,400-pound GT from 0 to 60 in a scant 3.1 seconds on the way to a top speed of 203 mph. Providing you drive at a more plebeian pace, an estimated 15/22 mpg enables the GT to extract nearly 420 miles from its 19-gallon tank.

It has to be livable. All that speed doesn’t matter if you can’t get out of your own driveway. Although it won’t be tackling the Rubicon anytime soon, the GT’s front end does feature a 10-degree



2020 McLaren GT

BASE PRICE	\$213,195
VEHICLE LAYOUT	Mid-engine, RWD, 2-pass, 2-door hatchback
ENGINE	4.0L/612-hp/465-lb-ft twin-turbo DOHC 32-valve V-8
TRANSMISSION	7-speed twin-clutch auto
CURB WEIGHT	3,400 lb (mfr)
WHEELBASE	105.3 in
L X W X H	184.4 x 80.5 x 47.8 in
0-60 MPH	3.1 sec (mfr est)
EPA CITY/HWY/COMB FUEL ECON	15/22/18 mpg (est)
ENERGY CONS, CITY/HWY	225/153 kW-hr/100 mi (est)
CO2 EMISSIONS, COMB	1.11 lb/mile (est)
ON SALE IN U.S.	Currently

approach angle, ensuring that most ramps and speed bumps can be taken without scraping the nose; ground clearance measures a decent 4.3 inches. A vehicle lift function raises the front end an additional 3 degrees and increases ground clearance to 5.1 inches. Reduced spring rates and twin-valve hydraulic dampers are tuned to compensate for this increased ride height and ensure the ride quality is GT-worthy. To keep your neighbors happy, the standard exhaust system features active valves that only open under hard acceleration.

It has to be practical. A long cargo area lives above the lowered engine, offering an astonishing (for its class)

14.8 cubic feet of space behind the rear seats. The shape compromises usability somewhat, but it also means the GT can swallow a golf bag or two sets of skis and boots. Even with these unwieldy objects in place, there's still room for an overnight bag or two. Need even more space? There's an additional 5.3 cubic feet of storage in the frunk, for a total of 20.1 cubic feet. Naturally, McLaren offers a custom luggage set that includes two bags, a garment case, and golf bag, all tailored to the fabric and color of your choice. At speed, the side intakes channel air around the compartment to prevent your perishables from perishing.

It has to be comfortable. Acres of leather adorn the cabin, and well-padded seats are designed to be comfortable over long distances. McLaren switch-gear continues to be a tactile delight. Metal stalks feel great to the touch and move into position with a beautifully weighted damping, and knurled knobs click into place with the precision of a Swiss watch. Two option packages, Pioneer and Luxe, pile on even more



Pay close attention to your surroundings. The McLaren GT lacks active safety features such as automatic emergency braking.

Despite their wooden feel, the brakes are ferociously strong. And the hydraulic steering lives up to its name, with fluid and precise movements. It's an absolute joy to guide the GT around corners and a reminder that even the best electric power steering still can't deliver this level of honest, rewarding feedback. The McLaren DNA is never more proudly evident than when the GT is charging through mountainous switchbacks or reeling in the miles at a furious pace.

Sure, the idea of crossing continents at deliriously high speeds is delightful in theory, but reality sometimes limits those opportunities to mere minutes, not hours. You'll spend the rest of the time somewhere in between, plodding along far below the speed limit, relying on the comfort of your car to keep you sane.

So the question remains: Is it a GT? The McLaren GT presents a nimble alternative in a class of heavyweights. It goes like stink, its ride is spectacular, and we can think of no other car in this class with this amount of cargo space.

That might be enough for existing McLaren customers looking for a more comfortable alternative. But further powertrain refinement and a usable infotainment system are necessary if McLaren really wants to light a new wick on the GT torch. Until then, we'd say it's two-thirds of the way there. ■

comfort and convenience. An optional Bowers & Wilkins audio system crams 12 speakers into the small cabin, including two subwoofers made of—you guessed it—carbon fiber.

Still, platform sharing is platform sharing, and the GT remains a sports car at heart. Around town, the GT could use a lesson in tractability. When mean-dering at slower speeds, the powertrain is gruff, cranky, and impatient. Despite extensive sound deadening and NVH refinements to the carbon-fiber structure, the irritated rumble of the V-8 still infiltrates the cabin at low rpm. Exacerbating this situation is a transmission that's often confused and reluctant to downshift, even with a decisive stab to

the accelerator. Noticeable turbo lag adds insult to alacrity. Creeping through rush-hour traffic requires not only patience but also exquisite timing. Not a big deal when you're on a racetrack, but it's unforgivable in a Grand Tourer.

Like other McLarens, nudging the brake pedal only introduces the calipers to the rotors; from there, modulation is all about pressure, not travel. The infotainment system screen washes out even in partial sunlight and is unreadable when wearing polarized glasses. Which is probably just as well; the interface is difficult to navigate and doesn't offer Apple CarPlay or Android Auto.

There's an easy solution to all of that, of course. Switch the transmission into manual mode and nail the throttle, and the GT comes alive. Flat torque curve or not, this is an engine that loves to rev. Once everything is spinning righteously beneath that capacious luggage compartment, the GT accelerates like a fierce, angry arrow, straight off the bow. Spontaneous passing maneuvers are ridiculously easy.



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WORDS DEREK POWELL

There's an urban legend that human beings only use 10 percent of their brain's capacity. Imagine the sheer potential that awaits if we were to harness the power of that other 90 percent. But the reality is that over the course of a normal day, the majority of us do tap into the full 100 percent of our gray matter. Just ... not all at once.

The 2020 Ferrari F8 Tributo, on the other hand, has absolutely no problem accomplishing this feat. Here is a supercar designed to enable its drivers to operate at the fullest extent of their ability—and then some. Do those percentages add up? It's all in how you do the math.

Building on the brilliant 488 GTB (the 2017 *MotorTrend* Best Driver's Car, by the

All hail Ferrari's Dynamic Enhancer and Side Slip Control, which do for this car what mere mortals cannot.

LIVING ON YOUR EDGE

way), the F8 Tributo manages to improve on its predecessor in nearly every way. The overall chassis carries over, but Ferrari has made significant upgrades to the engine, refined the aerodynamic profile, and even managed to save some weight in the process.

Let's start with that engine. Ferrari took the 3.9-liter twin-turbo V-8 used in the track-focused 488 Pista and revised it even further with lessons learned from its Challenge and Formula 1 racing divisions. Improved airflow throughout the combustion process increases volumetric efficiency, and engine internals were beefed up to handle the additional pressure. Even the air intakes on either side of the rear spoiler were redesigned to better feed air to the freer-breathing engine. It's all topped off with your choice of intake plenums: red-painted aluminum or optional carbon fiber. The result:

710 hp arrives at a lofty 8,000 rpm, all from an engine that is 40 pounds lighter than the one found in the 488 GTB.

The car is lighter by 48 pounds, thanks to the use of a carbon-fiber spoiler, a louvered rear window fashioned out of Lexan, a revised cooling system, and an optional lithium-ion starter battery sourced from the 488 Challenge. Ferrari offers 20-inch carbon-fiber wheels, should you wish to further lighten your wallet and your unsprung corners.

While we're using the math portion of our brain, how about a few more numbers: Thanks to the improved power and reduced weight, the F8 Tributo will rip from 0 to 62 mph in 2.9 seconds, hit 124 mph just 4.9 seconds after that, and achieve a blistering top speed of 211 mph.

Inside and out, the F8 Tributo's styling is a further evolution of the 488 GTB. Up front, an S-duct channels air from just below the front bumper to the revised

**INCREMENTAL
IMPROVEMENTS
MAKE A FANTASTIC
FERRARI EVEN BETTER**





A new headlight array is joined out back by quad taillights. Ferraris just look better with four lights in the rear.

cooling system, then through the center of the sunken, sculpted hood. Inside the cabin, noticeable improvements include round air vents shaped like jet engine nacelles, a smaller steering wheel, and updated infotainment options.

All of these updates are welcome, but what's it like to drive? In a word, magnificent. Out on the rough, narrow roads of rural Italy, it's as comfortable as a German sedan, albeit with much better reflexes. Credit the Bumpy Road setting of the adjustable dampers. The burble of the V-8 is such an essential component of the experience that I'm actually startled out of my reverie when the stop/start system kills it at a stoplight.

I do wish, however, that the seven-speed dual-clutch transmission wasn't

so greedy to gobble up the highest gear possible during sedate driving. And when looking in the rearview mirror, the louvers in the Lexan rear window seriously distort rearward visibility. But those are easily solved by looking forward and driving quickly. What's behind you doesn't matter, as the Grand Old Man (or was it Raul Julia?) used to say.

Despite its 41.5/58.5 percent front/rear weight distribution, high-speed stability is surprisingly impressive, thanks in part to the 15 percent increase in downforce provided by the S-duct.

Just as I merge onto the autostrada back toward Maranello, a family in an Audi RS6 Avant (with two car seats in the back!) blows past in the left lane. I

tuck in behind and give chase. Get on boost at high speed, and the F8 Tributo's V-8 soundtrack is overlaid with blasts of high-pressure air being shoved directly into the engine. Perhaps the music isn't classically Italian, but it's a thrilling score nonetheless. I peel off at the exit for Modena, and the RS6 driver toots his horn in farewell.

With such staggering performance numbers, the F8 Tributo really deserves to be driven on a track, so I join Ferrari development test driver Fabrizio Toschi for a few laps around Ferrari's famed Pista di Fiorano test circuit.

Toschi is a man of few words, preferring instead to communicate through the language of driving. As we conclude a warm-up lap around the circuit, he eases off the F8 Tributo's accelerator. "We wait for the first lap. Then you can push ... *pushpushpush*."

Decelerating near the beginning of the front straight, Toschi points to a sign that reads "Gas Off." Apparently, not everyone in town is a fan of the aria of supercars, and this brief sonic pause on the track is Ferrari's concession to their concerns. We coast onto the straight to reveal a "Gas On" sign lurking just beyond the bridge.





✓Yes



✓Yes



xNo



✓Yes



✓Yes



✓Yes

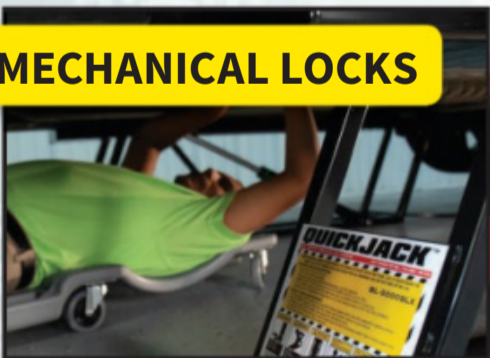
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As it turns out, “push” is Italian for “bury the accelerator into the floor.” A feral growl fills the cabin, and the F8 Tributo gains speed ferociously down what’s left of the straightaway. Toschi stays fully on the gas as he barrels through a negligible curve, straightens out, and continues accelerating all the way to the braking zone before Turn 1. Initial entry into this D-shaped right-hander is tight before it unfolds into a gentle arc all the way through Turn 2. Toschi cranks the wheel, and the F8 Tributo heads straight for the apex.

An apex is quite literally the pivot point for a corner. As the wheel is turned, judicious drivers patiently count down the milliseconds until the car passes the midpoint and they can begin to unwind. Adding more power before this moment—especially in a high-horsepower rear-drive car—can easily cause the rear end of the car to step out or spin.

Either Toschi has suddenly forgotten this fact, or he doesn’t care. Midcorner, he glances over at me, simply says, “Push,” and nails it. Miraculously, the F8 Tributo stays firmly planted on its initial trajectory and gains considerable momentum, as well.

This physics-taunting act is made possible by a combination of Ferrari’s Side Slip Control and Ferrari Dynamic Enhancer, a tag team of sensors and microprocessors that can make infinitesimal adjustments to the suspension, brakes, and power delivery

in a completely unobtrusive manner. If this isn’t an example of using 100 percent of your brainpower, I don’t know what is. So while Toschi adds power through the corner, all those systems are working in concert to find the maximum amount of grip and stability while continuing to put down as much power as possible. Unlocking this achievement is as easy as turning the *manettino* dial on the steering wheel to Race.

Purists may scoff, but let’s be honest: Casually exploring the slip angles and limits of adhesion in a 710-horsepower supercar without the safety net of modern technology is like giving your cat a bath. It’s highly likely one or both parties will end up hurt. Sure, these systems can make anyone look like a hero, but in the hands of drivers who genuinely want to improve their skills, this is a fantastic way to do it.

Besides, what’s the point of having a big brain if you can’t show off a little? On the next lap, Toschi twists the dial to CT-Off. “Now for some fun,” he says. Once again on the first turn, he nails it midcorner, but this time the rear end of the F8 Tributo swings out—and stays

**CASUALLY EXPLORING
THE LIMITS OF A 710-HP
SUPERCAR WITHOUT
SAFETY NETS IS LIKE
GIVING A CAT A BATH.**

put as Toschi drifts around the corner. The level of precision to the drift angle is astounding. Yes, I’m riding with one of the most skilled drivers in Italy, but it again demonstrates the F8 Tributo’s ability to find the absolute limits of power and adhesion then keep you there for as long as you can stand it.

After that, I’m granted a measly two laps to myself on the test circuit, and I have nothing exciting to share. Carrying a price tag that’s about a hundred grand more than a four-year stint at an Ivy League school, the F8 Tributo is not something you wish to risk damage in: to it, your wallet, or your ego.

But I will say this: Even when driven at its most extreme, the F8 Tributo is never violent. The gearbox swaps cogs with a brisk efficiency, steering is quick yet never twitchy, and the brakes simply do what you ask of them. G-forces pin you to the seat, and the world around you rushes by in a canted, dizzying blur. Yet the F8 Tributo remains fully composed and in full command of its faculties. In other words, it’s smarter than I am. And you know what? I’m OK with that. ■



2020 Ferrari F8 Tributo

BASE PRICE	\$293,480 (est)
VEHICLE LAYOUT	Mid-engine, RWD, 2-pass, 2-door coupe
ENGINE	3.9L/710-hp/568-lb-ft twin-turbo DOHC 32-valve V-8
TRANSMISSION	7-speed twin-clutch auto
CURB WEIGHT	3,150 lbs (mfr)
WHEELBASE	104.3 in
L X W X HEIGHT	181.5 x 77.9 x 47.5
0-62 MPH	2.9 sec (mfr est)
EPA CITY/HWY/COMB FUEL ECON	15/19/16 mpg
ENERGY CONSUMPTION, CITY/HWY	225/177 kW-hr/100 miles
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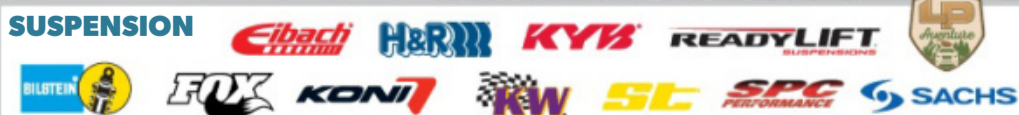
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Updates on our long-term fleet

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ARRIVAL: Genesis G70 3.3T

**EPA CITY/HWY/COMB Fuel Econ:**
17/26/21 mpg**"Nimble, darty, quick. Great seats. Kickin' stereo. The G70 could be the perfect tool for an L.A. commute." Mark Rechtin****Base price \$44,745 As tested \$46,495**

I need to get one thing out of the way first: I didn't vote for the Genesis G70 to be *MotorTrend* Car of the Year. I was part of the underground movement trying to award it to the Honda Insight hybrid. But our effort was Sparta defending Thermopylae: valiant but doomed. And in the end, I can honestly say I'm fine with the Genesis having won. It deserved the honor of being

the first South Korean vehicle to win an OTY award, and it won fair and square.

But this also means that my yearlong loan will not be a wet kiss to Hyundai's luxury brand. Sure, a fanboy would wax lyrical about the latest entry into the hotly contested "Is the G70 better than a BMW 3 Series?" battle. (Answer: Yes, as seen in our comparison in the August issue.)

From my perspective, however, this means I might be a bit more judicious in describing my experience. But that circumspect tone will only serve to help you, in terms of defining the Genesis brand's place in the automotive world, and answering the questions that many of you have about this upstart entry:

Is this just a Hyundai with

better seats and a nicer stereo?

Is it worth the price?

Is it as good as the Germans or the Japanese?

Is the service experience more like Lexus or Hyundai?

And so on.

Over the course of the year, these questions will be answered. Just because a car wins Car of the Year doesn't mean it cannot have faults. We will find them and call them out. You only hurt the ones you love, after all. But we'll also celebrate the G70's

victories, smart plays, and savvy decisions. And there are many, or else it wouldn't have reached the top of our podium.

It was tempting to see if we could get a value-packed base model G70 with a 2.0-liter turbo-four to see if we could underprice a loaded Honda Accord. (You can.) But the enthusiasts in the office voted for the tire-melting 3.3-liter V-6 version. Turns out Genesis allows you to create a value-packed V-6 version, as well, for thousands (and thousands and thousands) less than the German triad.

The G70 RWD 3.3T Elite we ordered comes in at \$46,495, including \$1,750 for the Elite package. Sharp-eyed readers will see the price and flip back to the October issue, where Jonny Lieberman raved about the G70's platform-sharing, slightly larger cousin—the Kia Stinger GT—which crossed the pricing scanner at \$50,100.

This pricing paradox for two nearly identically equipped vehicles, the more expensive one coming from the mass-market brand, is something that should be reconciled in Seoul. If Toyota

2019 Genesis G70 3.3T

Vehicle Layout Front-engine, RWD, 5-pass, 4-door sedan
Engine 3.3L/365-hp/376-lb-ft twin-turbo DOHC 24-valve V-6
Transmission 8-speed automatic **Curb Weight** 3,833 lb
Wheelbase 111.6 in **0-60 MPH** 4.5 sec **Energy Cons, City/Hwy** 198/130 kW-hr/100 miles **CO2 Emissions, Comb** 0.96 lb/mile

**Height 55.1"****Width 72.8"****Length 184.5"**

PAUL LAGUETTE

BMW X3	CHRYSLER PACIFICA	UPDATE FORD F-150	ARRIVAL GENESIS G70	HONDA CIVIC TYPE R	HONDA INSIGHT	HYUNDAI KONA	UPDATE INFINITI QX50
							
							
JEEP WRANGLER UPDATE	NISSAN KICKS	RAM 2500 POWER WAGON	RAM 1500 LARAMIE	SUBARU ASCENT	VOLKSWAGEN ATLAS	VOLVO S60 UPDATE	VOLVO XC60

priced a Lexus ES cheaper than a Camry XLE, heads would roll in Nagoya.

So what do you get with a G70 for 46 large? A lot.

The throaty V-6 is mated to an eight-speed shift-by-wire automatic transmission with paddle shifters and rev matching, along with a limited-slip differential. The 19-inch wheels are shod with Michelin Pilot Sport 4 summer tires and clamped by ventilated Brembo front and rear disc brakes.

Lighting features include full LED headlights and taillights, automatic high-beams, LED running lights, and LED turn indicator lights on the power-folding side mirrors.

Full leather seats provide the driver with 16-way adjustment and four-way lumbar support. Both driver and front passenger get heated and ventilated seats.

A scan of the interior shows aluminum trim, power tilt-and-telescoping steering wheel wrapped in perforated leather, and dual-zone climate control. Information comes from a 7.0-inch instrument panel screen and an 8.0-inch infotainment touchscreen with navigation, Apple CarPlay/Android Auto integration, and satellite radio blasting through a 15-speaker Lexicon stereo. There are three USB ports and Bluetooth connectivity.

In total, our G70 has a lot of stuff in a well-priced package. This is no stripped-down version designed to lure in someone who just wants the cheapest V-6 in the segment. This is value, pure and simple. As for how this package performs, stay tuned.



2019 Jeep Wrangler



Service life:
3 mo/5,798 mi • Avg Fuel Econ: 17.9 mpg

"If it were my money, would I really buy a Wrangler? After three months, I lean toward yes." Christian Seabaugh

Avg CO2 1.08 lb/mi **Energy cons** 187 kW-hr/100 mi
Unresolved problems None
Maintenance cost \$0 **Normal-wear cost** \$0
Base price \$43,040 **As tested** \$57,110
EPA City/Hwy/Comb Fuel Econ 22/24/22 mpg

The firetruck-red Jeep Wrangler Unlimited Rubicon that sits in the *MotorTrend* garage is arguably the most off-road-capable factory vehicle in the world, and I've finally gotten the opportunity to break free from the pavement and start to get it properly filthy.

A couple months back we decided to spruce up our New Car Buyer's Guide content with "What Should I Buy" pieces focusing on cars, trucks, and SUVs. After agonizing over which SUV I'd "buy" for a couple weeks, I landed on the 2019 Jeep Wrangler Unlimited Rubicon because of my penchant for spur-of-the-moment exploration.

We don't always get to choose our assigned long-term vehicle—let alone spec one—but our Wrangler is a near-perfect match for the one I'd buy. That's lucky because the itch for a spontaneous road trip (and the free time) cropped up again the other weekend.

Our plan was simple: with a day to burn, go north and hopefully find a water source for our dogs to play in. We rolled out of town just as the sun spilled into the L.A. basin and the Jeep's windows.

Wranglers may not be your traditional road-trip vehicle, but when you don't know what your road trip is going to entail, they're tough to beat. On the highway, our Jeep's mild hybrid 2.0-liter turbo I-4 is punchy but efficient, and thanks to the Unlimited model's long wheelbase, its ride is surprisingly agreeable over SoCal's freeway expansion joints.

Northeast of Santa Barbara a few hours later on some



no-name back road, we stumbled upon our first trail, a narrow, twisting, hard-packed dirt two-track that eventually dumped us out near an intermittently flowing stream. As one of my friends back in high school used to say, "light work."

Dogs soaked and satisfied, we found our way back to asphalt and continued north, looking for something that'd challenge the Jeep a bit more. Eventually we found our way back to the ocean and into the coastal town of Oceano, home of Oceano Dunes State Vehicular Recreation Area.

Just south of the better-known Pismo Beach, Oceano's beach is unique among the 840 miles of California coastline in that its 6-mile allotment is one of only a few beaches in California open to vehicles. It may not be long for this world, either—local groups have been lobbying the state hard to shut it down due to environmental concerns, such as harm to local wildlife (fair) and kicked-up sand that blows into town.

Despite the threats of closure, the beach was packed with every sort of vehicle you could imagine—from side-by-sides and Priuses to Raptors and supercarrier-sized campers. Many of the vehicles in front of us at the gate pulled aside once clear to air down their tires, but we were confident in our Wrangler's oversized BF Goodrich KO2 rubber. I simply yanked the transfer case into four-high and plowed onto the beach. The Wrangler hardly noticed the terrain change.

After exploring the dunes and watering the pups in the ocean, we turned back south and got back home just as the sun was disappearing over the Pacific Ocean. I'd been wondering if the Jeep Wrangler Rubicon really was the SUV I'd buy for my family. This little trip proved to me that I'd made the right choice.



2019 Infiniti QX50

Service life: 10 mo/18,240 mi • **Avg Fuel Econ:** 20.7 mpg



"The QX50's interior intrigued me from the start. After nearly a year, it's still impressive."
Collin Woodard

Avg CO2 0.94 lb/mi
Energy cons 160 kW-hr/100 mi
Unresolved problems None
Maintenance cost \$212 (2- oil change, inspection, tire rotation)
Normal-wear cost \$0
Base price \$46,145 **As tested** \$59,085
EPA City/Hwy/Comb Fuel Econ 24/30/26 mpg
Real MPG 20.7/29.9/24.1 mpg

When the long-term Infiniti QX50 first arrived at our office, I'll admit I was primarily interested in the engine. But the interior was a close second. After all, the version we ordered came with blue faux suede on the door panels, the dash, and the center console. How cool is that?

That extra design flourish made the cabin really stand out, even to people who had little interest in cars and even less interest in hearing about the cutting-edge technology hiding under the hood. And in a time when most automakers don't do much to differentiate their interiors from one car to the next, it's hard not to be drawn in by something truly different.

One thing I wasn't sure of, though, was how I'd feel about the interior by the

end of a full year. Would it still look as great after 20,000 miles? Would daily use expose issues and frustrations that weren't immediately obvious? And perhaps most important, how would the faux suede hold up?

Almost a year later, the novelty of the QX50's interior has definitely worn off. But even though it's not perfect, familiarity has yet to breed contempt. (I reserve that feeling for the technically fixed but still outdated infotainment system.) The fact that almost every surface is covered in leather, wood, or faux suede is still impressive.

That said, the way the blue faux suede is wearing has me worried about how it will look by year three. I'm also not sure I'd let sticky-finger-aged children anywhere near it.

As far as frustrations go, the shift lever has always jiggled a little and appears to simply be built that way. The intentionally mismatched wood trim also still looks like a mistake made at the factory, and the infotainment control knob's placement makes it easy for front passengers to hit accidentally.

In the grand scheme of things, though, those complaints are pretty minor. Personal preference for faux suede aside, the QX50's cabin still impresses even as it approaches the 20,000-mile mark, and Infiniti should be proud of that.

ALMOST A YEAR LATER, THE NOVELTY HAS WORN OFF, BUT FAMILIARITY HAS YET TO BREED CONTEMPT.



VERDICT: 2018 Honda CR-V LX



"Even on its base form, the CR-V didn't disappoint. It did its job like a champ and never let us down."

Miguel Cortina

Base price \$25,125 **As tested** \$25,125

Service life: 12 mo/17,732 mi
Avg Econ/CO2 26.2 mpg/0.74 lb/mi

Our history with the CR-V is extensive. When the current generation made its debut at the end of 2016, we got a long-term CR-V Touring, which we drove for a year. A few months later we named it our 2018 SUV of the Year. And after being crowned with our top award, we got another long-term CR-V to evaluate for 12 months—except this time we chose the base LX model. We've come to the end of our loan with the CR-V LX, and there's plenty of things we liked. We're really going to miss this one.

Sure, this is the base trim level, but that doesn't necessarily mean it's a cheap car. The plastics around the cabin feel nice. Although the steering wheel lacks any kind of leather, the soft plastic gives it a premium feel. The same goes for the door panels and dashboard. And in places you would rest your arm or elbow, decent cushioning will make your limbs comfortable. We also found that the seats are pretty comfy during long trips.

Regarding technology, however, you get what you pay for. The tiny 5.0-inch color screen could use an upgrade to incorporate a better, more modern infotainment system, and these days we need more than one USB port. The Mazda CX-5 offers a 7.0-inch screen and two USB ports as standard, and Apple CarPlay and Android Auto come standard in the Hyundai Tucson, which is also more affordable than the CR-V. The Toyota RAV4—the CR-V's main competitor—comes with Apple CarPlay standard. These upgrades are found in the CR-V EX trim, but they should come at no added cost.

Speaking of standard features, I dig the rear air vents, capless fuel filler, and electronic parking brake. We used to only see these things in top trims. Another good feature is the standard four-speaker audio system, which sounds crisp whether you're playing music through Bluetooth or the sole USB port. And automatic air conditioning on a base car is always nice.

After more than a year with the CR-V LX, the thing that really stands out is its



SPECS Options None
Problem Areas None
Maintenance Cost \$286.32 (3-oil change, tire rotation, inspection)
Normal-Wear Cost \$0
3-Year Residual Value* \$17,800 (71%)
Recalls None

*IntelliChoice data; assumes 42,000 miles at the end of three years

versatility. With a cavernous cargo area and second-row seats that fold flat from either the back or the second row, it's easy to fit in large objects, and the cargo floor also has two heights. Those well-considered details make a difference.

Although the 2.4-liter naturally aspirated engine is old, it still pulls hard. Step on the gas, and you'll feel a decent push—whether pulling away from a stoplight or merging onto the freeway. The CVT is well mated to the engine, though it can be loud, and not in a good way.

Despite being more than two years old, the CR-V's styling still looks modern. I like that there are a few details on the LX that make it look a bit more premium, like the LED daytime running lights and 17-inch alloy wheels, but it would be nice to see the door handles, mirror caps, and

spoiler in body color instead of the black plastic. Another thing I missed every day was tinted windows; without them, I felt like I had no privacy at all. When I drove at night, the lights from 18-wheelers would create a strong reflection from the rearview mirror, which also made me miss the tinted windows.

Over roughly 18,000 miles, we spent \$286.32 on three service visits. All services were done at the dealership and consisted of three oil and filter changes and tire rotations, and one brake inspection and cleaning. Compared with other long-term compact SUVs we've had, the CR-V LX was generally cheap to maintain. The 2017 Kia Sportage EX cost \$223.41 over the course of three service visits and more than 21,000 miles, but we spent \$341.96 on our 2016 Mitsubishi Outlander (three service visits, 26,871 miles) and \$340.57 on our 2017 Mazda CX-5 (four service visits, 28,307 miles). Our 2017 Hyundai Tucson Limited cost \$389.88 in three service visits over the course of 22,096 miles.

We're going to miss the Honda CR-V LX. For \$25,000, it's one of the best SUV values you can get today.



2018 Honda CR-V LX

DRIVETRAIN LAYOUT	Front-engine, FWD
ENGINE TYPE	I-4, alum block/head
VALVETRAIN	DOHC, 4 valves/cyl
DISPLACEMENT	143.8 cu in/2,356cc
COMPRESSION RATIO	11.1:1
POWER (SAE NET)	184 hp @ 6,400 rpm
TORQUE (SAE NET)	180 lb-ft @ 3,900 rpm
REDLINE	6,500 rpm
WEIGHT TO POWER	17.9 lb/hp
TRANSMISSION	Cont variable auto
AXLE/FINAL DRIVE RATIO	5.05:1/2.05:1
SUSPENSION, FRONT; REAR	Struts, coil springs, anti-roll bar; multilink, coil springs, anti-roll bar
STEERING RATIO	12.3:1
URNS LOCK TO LOCK	2.3
BRAKES, F; R	11.1-in vented disc; 10.2-in disc, ABS
WHEELS	7.5 x 17-in cast aluminum
TIRES	235/65R17 104H (M+S) Hankook Kinergy GT
DIMENSIONS	
WHEELBASE	104.7 in
TRACK, F/R	63.0/63.7 in
LENGTH X WIDTH X HEIGHT	180.6 x 73.0 x 66.1 in
GROUND CLEARANCE	7.8 in
APPROACH/DEPART ANGLE	19.3/23.5 deg
TURNING CIRCLE	37.4 ft
CURB WEIGHT	3,290 lb
WEIGHT DIST, F/R	59/41%
TOWING CAPACITY	1,500 lb
SEATING CAPACITY	5
HEADROOM, F/R	40.1/39.2 in
LEGROOM, F/R	41.3/40.4 in
SHOULDER ROOM, F/R	57.9/55.6 in
CARGO VOLUME BEH F/R	75.8/39.2 cu ft
TEST DATA	
ACCELERATION TO MPH	
0-30	3.1 sec
0-40	4.3
0-50	5.8
0-60	7.7
0-70	10.0
0-80	13.0
0-90	16.6
0-100	21.0
PASSING, 45-65 MPH	3.7
QUARTER MILE	16.0 sec @ 88.4 mph
BRAKING, 60-0 MPH	118 ft
LATERAL ACCELERATION	0.84 g (avg)
MT FIGURE EIGHT	27.7 sec @ 0.62 g (avg)
TOP-GEAR REVS @ 60 MPH	1,950 rpm
CONSUMER INFO	
BASE PRICE	\$25,125
PRICE AS TESTED	\$25,125
STABILITY/TRACTION CONTROL	Yes/Yes
AIRBAGS	6: Dual front, front side, f/r curtain
BASIC WARRANTY	3 years/36,000 miles
POWERTRAIN WARRANTY	5 years/60,000 miles
ROADSIDE ASSISTANCE	3 years/36,000 miles
FUEL CAPACITY	14.0 gal
REAL MPG, CITY/HWY/COMB	23.3/36.1/27.7 mpg
EPA CITY/HWY/COMB ECON	26/32/28 mpg
ENERGY CONS, CITY/HWY	130/105 kW-hr/100 miles
CO2 EMISSIONS, COMB	0.68 lb/mile
RECOMMENDED FUEL	Unleaded regular





2018 Ford F-150



"Plenty of LEDs in and around the bed help in case moving day stretches well into the night."

Erick Ayapana

Service life: 11 mo/21,437 mi
Avg Fuel Econ: 17.1 mpg

Avg CO2 1.13 lb/mi

Energy cons 198 kW-hr/100 mi

Unresolved problems None

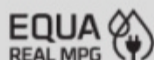
Maintenance cost \$140 (2-oil change, inspection, tire rotation)

Normal-wear cost \$0 **Base price** \$44,835

As tested \$57,910 **EPA City/Hwy/Comb**

Fuel Econ 19/24/21 mpg

Real MPG 18.6/23.9/20.6 mpg



I recently moved to a new place, which was exciting and also arduous. Thankfully I'm the chaperone of our long-term F-150, so I had dibs on the best moving truck in the *MotorTrend* fleet.

The F-150 has many tools that made the move relatively easy, but there were

still a few times when I wished it had more tricks.

Four standard hooks—one at each of the bed's lower edges—probably got the most use during the move. Our truck is also fitted with the optional BoxLink system, which includes four cleats with hook attachments. These are located about halfway up the inside wall on each side of the bed, near the front and back of the bed. This was fine most of the time, but when I was securing an awkwardly shaped dining table, I wished there were also cleats in the middle of the bed.

While a friend was attaching a ratchet strap to one of those hooks, he discovered a switch for the LED bed lights that I didn't know existed. Nice touch.

The retractable box side steps at the front end of the bed were also super helpful when we were grabbing and securing items. That said, we forgot to push the steps back into place a few times; thankfully, they don't stick out far enough to take out motorcyclists or bicyclists. They do look a bit awkward,

though. It'd be nice if the side steps could mirror and continue the clean look of our truck's running boards.

Steps at the back of the truck would've been helpful, too. We didn't opt for the available step housed within the tailgate because it seemed like a hassle. For a simpler and more elegant solution, check out the Chevrolet Silverado; its steps integrate in the corners of the rear bumper.

As I've reported before, one of the benefits of choosing the shorter SuperCab body style is the standard 6.5-foot bed. In fact, it was spacious enough to fit my new couch without using the bed extender. Pro tip: Flip the bed extender toward the front of the truck to act as a divider for your cargo.

That said, the bed extender revealed one issue. Our truck has the optional hard bed cover, which latches directly over the base of the bed extender. Operating the latches is not only awkward but also damaging. Both plastic latches are now cracked and don't securely stow away in the cover when not in use as designed (but at least they still securely lock the cover over the bed). Hopefully Ford will consider moving or redesigning the latches (or bed extender) so both can coexist without issue. For now, we'd recommend picking one or the other, or perhaps a better aftermarket option.

Despite those quibbles, the Ford F-150 eased the burden of moving.





2019 Volvo S60

Service life: 2 mo/5,165 mi • **Avg Fuel Econ:** 26.0 mpg



"The S60's drive and handling is tailored toward comfort, yet it's engine doesn't disappoint."

Miguel Cortina

Avg CO2 0.75 lb/mi

Energy cons 130 kW-hr/100 mi

Unresolved problems None

Maintenance cost \$0 **Normal-wear cost** \$0

Base price \$40,300 **As tested** \$50,630

EPA City/Hwy/Comb Fuel Econ

21/32/25 mpg

Real MPG 18.9/30.7/22.9 mpg



Regardless, with 316 hp on tap, the S60 feels quick. I'm a fan of the way its engine behaves, but some co-workers have complained about its lack of refinement.

Some people buy Volvos because they care about safety, and the S60's Pilot Assist safety suite seems good. So far, I've only experienced one close call with the automatic emergency braking, where the vehicle in front of me slammed on the brakes and the Volvo did the same, preventing a possible accident.

But there have been a handful of times where the auto emergency braking alert lights up even when there's no vehicle in front of me. When this happens, the

power is completely cut off for a second or two, and once the system detects that there's no one around, everything returns to normal. It happened to me once on my way back from San Francisco on I-5 and has happened about four times on my way to work. More than anything, it's unsettling when the head-up display turns red and a loud alarm sounds in the cabin when there's no real danger happening and you're peacefully cruising down the road.

Following its cross-country trip to L.A. and with the miles I've put on it since, the S60's odometer has passed 5,000 miles—not bad for two months.

Road trips are great. Not only do you really get to experience the landscape and culture of the places you visit or drive through, but you also get to know your car and its amenities. That's why when I decided to take a quick trip to San Francisco this past summer, I took the long and mostly boring way up I-5 instead of taking the one-hour flight from Los Angeles, to further get to know the 2019 Volvo S60 I'd been chaperoning for about two months.

The S60 leans more toward comfort than performance. Although it competes in the same category of luxury sedans as the BMW 3 Series and Genesis G70, the S60 is not trying to be a sport sedan. Instead, it delivers on comfort and plushness while providing plenty of power from its supercharged and turbocharged 2.0-liter four-cylinder engine. It won't, however, try to up the exhaust note through the speakers when it's in dynamic mode, like the two aforementioned competitors.



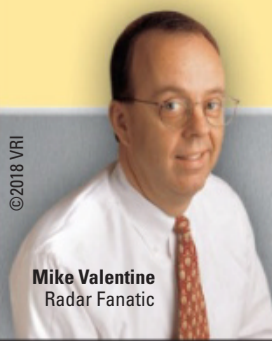
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The Big Picture



Touch and Go: The trouble (and danger) with touchscreens

We owe Chris Bangle an apology. The avant-garde BMW designer was roundly castigated when his provocative reworks of the 5 Series and 7 Series sedans hit the streets in the early 2000s. The undercut bodysides, contorted surfacing, and edgy detailing offended the auto industry's chattering classes.

Yet even the so-called "Bangle butt," the squared-off trunklid with unusual cutlines that improved straight-line stability in crosswinds and delivered an easily accessible load space, was relatively spared the opprobrium heaped on the first generation of the iDrive telematics interface. It wasn't a Bangle invention. But the philosophy behind it—reducing the proliferation of buttons in the cockpit while increasing access to vehicle functionality—aligned with his iconoclastic take on automotive design.

iDrive used a chunky, twist-and-press, haptic-feedback rotary controller that tilted through four axes to access various menus and present information on a screen. It was criticized for being complex and difficult to use. But after driving more than 70 vehicles during evaluations for our annual SUV and Car of the Year awards, many equipped with touchscreen user interfaces, that original iDrive concept now looks like a paragon of common-sense industrial design.

Touchscreens have changed the world. Many of you have one within arm's reach as you read this. They're seductively reductive in terms of design, limpid dark pools that explode into color and movement at the swish of a finger to help you unlock the mysteries of modern life. Or order a pizza. But they're a poor user interface while piloting a machine that moves.

In the aftermath of the 2017 collision between the USS John S. McCain and a civilian tanker in the Singapore Strait in which 10 sailors died, the U.S. Navy is about to ditch touchscreen helm controls on its destroyers. Reporting on the investigation into the incident, the U.S. Naval Institute said a complex touchscreen system that sailors had been poorly trained to use had contributed to a loss of control of the ship.

Automakers have fallen in love with touchscreens not just because they look cool but because they save money: Using software to create a glitzy and glamorous user interface costs a whole lot less than designing, making, and assembling a bunch of switches and buttons. And you can create more menus and icons to do more things with no real penalty in manufacturing costs or vehicle weight. More perceived feature value at marginal cost: Touchscreens are an auto industry bean counter's dream.

But the problem of complex systems



PHOTO: DEPARTMENT OF DEFENSE

Touchscreens are a poor user interface while piloting a moving machine.

and poor training is just as real in a new car as on the bridge of a Navy destroyer. During Of The Year testing, I was struck by the fact that every manufacturer's touchscreen interface had a totally different layout and logic path. Couple that with the fact that most of us only give our vehicles' owner's manuals a cursory read, and the potential for operator error is obvious. And the error might be more serious than accidentally selecting the wrong radio station.

Raluca Budiu, director of research at user interface and experience specialist Nielsen Norman Group, points out that although touchscreen dashboards offer more flex-

ibility than analog dashboards, they have one big disadvantage: no haptic feedback.

In the analog world, we can learn the location of a physical button and then find it without directing much attention to it, Budiu says. (That's how, she notes, people play the piano while reading music, or touch-type on a real keyboard.) Locating a button on a screen, however, requires you to visually confirm its position. When more buttons are hidden under more menus, selecting them involves multiple touchscreen interactions, requiring even more time and attention. Budiu's obvious conclusion: "Time spent with the user interface is time spent ignoring the road."

iDrive wasn't perfect. But its rotary controller provided a firm anchor point for the driver's hand, even on bumpy roads, with the haptic feedback delineating clear paths to digital buttons on a high-mounted screen located adjacent to the primary view through the windshield.

It was an idea ahead of its time. ■

The collision between the USS John S. McCain and a civilian ship was blamed on an overly complex touchscreen system.



A full-page advertisement for Wrangler. The background is a photograph of two men on a dirt road. The man on the left is in the foreground, looking back over his shoulder. He is wearing a dark denim jacket with 'WRANGLER' and 'EARN YOUR SHIRTS' printed on the back, and blue jeans. The man on the right is further down the road, walking away from the camera. He is wearing a light blue long-sleeved shirt and blue jeans. A black car is parked on the road between them. In the background, there is a large metal bridge structure and rolling hills under a cloudy sky. The word 'Wrangler' is written in large white letters across the middle of the image, with a registered trademark symbol (®) to the right of the 'r'.

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